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MEDICAL AND SURGICAL JOURNAL.

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VOLUME XIII.

"Liberam profitero medicinam, nec ab antiquis sum, nec a novis; utrosque ubi veritatem colunt, sequor."—KLENIUS.

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PART I.—ORIGINAL COMMUNICATIONS.

Article I.

Yellow Fever—its identity with the so-called Malarious Fever. Read before the St. Louis Medical Society. By E. H. Gregory, M. D.

It will be remembered that several weeks since, a committee was appointed to review certain papers presented to this body by Dr. Wm. Webb. Our report was due some time ago, but as several members of the association expressed themselves tired of the discussion, we thought proper to dismiss the subject for a time, nor would we at present refer to the matter, had not the remissness of the committee been adverted to at our last meeting.

The object of the first paper was to sustain the following proposition, to-wit:

That heat and the unacclimated constitution are the only conditions concerned in the production of fever; that it is folly to search for any other cause, as the conditions mentioned are sufficient to explain every circumstance associated with the production of this disease.

Your committee cannot believe the above proposition correct. We agrne that heat and non-assimulation are of paramount importance, that heat especially is uniformly conected with the occurrence of fever. As for non-acclimation, perhaps we do not understand its meaning, but presume as some individuals are said to be unacclimated others are acclimated, if so, what produces fever in the latter class, heat of course; and as the nature of fever is the same in all latitudes, heat is

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the cause every where. In short non-acclimatization, is at most but a predisposing cause, seeming rather to aggravate the type of the disease than determine the attack.

We are aware all attempts to connect fever with soil, surface, moisture or sources of malaria, have proved unsatisfactory, and further, it must be confessed, the closest investigation has failed in the discovery of the essential cause of fever; again, whilst it is true heat is always present when the disease prevails, it is equally true that fever does not always prevail where heat is present, so far from it, the more destructive epidemics have occurred in what are called the "*cool seasons.*" Dr. Gillherst says of Gibralta, "the summer of 1828, was, on the whole, the coolest remembered for a long time, for though it averaged for the five warm months (from June to October) rather a higher range than the preceding year, the difference is too trifling to be considered, when it is to be observed, that several healthy years had been much hotter, and that in the three months in 1827, corresponding to those which preceded the epidemic of 1828, the average heat was greater by 2½ degrees.

Humboldt says, "we have also statements of the best authorities as to the epidemics of Spain, not appearing oftener in the hottest seasons. In 1752, the heat was so excessive in Gibralta, that the inhabitants during the night fancied their houses on fire, and birds forsook their nests, but no epidemic took place." Again, Southwood, Smith and others, say, extreme heat is unfavorable to the development of yellow fever. Again, Arejula, an eminent Spanish physician, writes, "while the days lengthen and the sun approaches our hemisphere, we may be sure the fever, which has so long afflicted us of late years, will not attack us; but when that luminary begins to retire from us and during the whole period of its retiring, we may fear it.

That heat is invariable, connected with the production of fever there can be no doubt. But to assert as contained in the paper under consideration, that it is the absolute cause of this malady, seems to us wholly unwarrantable. We readily admit the predisposing influence of heat, but however much the blood may be altered from this cause so long as the sluices of the skin are unimpeded, disease is not declared, but close this organ and the constitution is at once deranged; hence, follows the explanation of the fact that the particular form of disease we are considering is most prevalent; when the "sun retires from our hemisphere," when the season is marked by vicissitudes, by alternations of temperature.

Notwithstanding, we have endeavored to show, that heat is not the essential cause of fever, we frankly acknowledge our

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inability to say what the cause or causes are which produce the disease. The doctrine of malaria, which possessed the medical mind for so many years, has of late, received so many shocks as to lead to its abandonment by a large number of philosophers; yet it cannot be denied that the weight of medical authority still favor the hypothesis, still hold that certain external localizing cause, certain terrestial emanations play an important part in the production of fever. In fact, evidence bearing upon this point, collected from the various sources where fever in its most aggravated type is endemic, seems to be almost overwhelming. Shaftesbury, Chadwick, Southwood, Smith and others, appointed by the British Government, to examine the facts connected with yellow fever arrived at the following conclusions:

"That yellow fever is often confined to particular houses on a street, or one side of the stteet, to particulor rooms in the same house, and often to particular rooms in the same story. When prevalent in a locality, the most "*rigid seclusion*," in that locality affords no protection. That removal from a particular locality, and the dispersion of the sick in a healthy district often arrests the disease at once. That whatever may be exciting cause, it is "*local*" or endemic in its origin. That in proportion as these localizing cause are removed or diminished yellow fever ceases to appear. That individuals or bodies of men recently arrived within the yellow fever zone, should avoid going into a district in which the fever actually exists, or has recently been present. That consequently, the means of protection are not quarentine restrictions, but sanatory works, having for their object the removal of the several localizing conditions.

If the above conclusions are to be relied upon, and they are certainly justified by the testimony, as the doubting may verify by examing the records; what better proof do we wish of the existence of other causes of fever than those assumed in the paper.

The next question to be discussed is, whether yellow fever is a distinct and specific disease, or whether it belongs to that class of fevers known as remittent continue an intermittent differing from these only in violence, rapidity of course and ultimate phenomenon?

To the sentiments of the paper, bearing on this part of our subject, we subscribe most heartily. We must, however, remark in the outset, that had we believed heretofore that heat was the absolute cause of fever, the experience of the passing year would have shocked our faith. The heat has been more intense and long continued than has been known in any former year, yet the general good health is remarkable.

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Physicians from the earliest ages have attempted to define fever, but a definition sufficiently comprehensive to include all its varying forms has not yet been written. Certain changes in the pulse, viz: increased frequency and force, or preternatural frequency without force; or excess of force without frequency accompanied with certain alterations of the secretions as various as the changes of the pulse make up the sum of prominent symptoms in an ordinary case of fever. But the extraordinary cases are so numerous—new phases being constantly presented—that much diversity of opinion has arisen. Many medical men even of the present day not being, reconciled to the idea that its varying forms are but grades of the same disease.

Of the different varieties of fever, our climate presents many examples. Here we have mild intermittent, intermittent congestive, remittent and continued fevers, or if we wish to make some addition to the uame expressing complication, then we have the bilious, gastric, brain, and bone or rather break bone fever. In short, we have every phase of disease, from slight periodic supra-orbital pain to that most intense morbid action which transcends in force that which produces inflammation, the patient being overwhelmed in the primary stage, viz: that of congestion. But notwithstanding the great diversity of phenomena presented, medical men, with few exceptions, agree that all are but phases of the same disease—that all are but expressions of the same cause. And why? simply because all prevail in the same locality, all prevail during the same season, all occur in the same individual, in the course of the same attack of sickness, and further, the same kind of treatment cures all.

The question has been asked, "whether if diseases differ in their cause, onset, progress, termination, and accompanying circumstances; are they not different in their nature?" *Grant it!* We ask, however, with the same breath, is it a fact, that yellow fever thus differs from other forms of fever? has any evidence been brought here to establish such an assertion? is there any such evidence in the minds of medical men present? is there any such evidence in print? We distinctly say no! on the other hand, we are prepared to prove from evidence drawn from authors, who believe in the specific nature of yellow fever that no such evidence exists, so far from it we will prove, as will appear from their writings, the similarity in every particular of yellow fever and the ordinary remittent fever of temperate latitudes.

1st. The cause of yellow fever. Bearing upon this part of our subject, Dr. Fergasson gives an instance which may be taken as an example of a general rule. It appears (an ac-

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count of the "Reglia," transport from the coast of Africa for the West Indies in 1845), the crew was healthy till she took on board a large quantity of green wood. The ballast had never been changed or shifted from the time she left England, nor for any discoverable time before. It was what is called shingle ballast, small stones with a considerable mixture of mud and other impurities; and when I examined it, had been fouled by leakage from the water casks. A ship, he adds, navigating the tropical seas with a quantity of green wood recently laid in and foul ballasting that had not been changed for years, and impregnated with the gases arising from putrid sea water, I conceive perfectly adequate to the production of the most destructive fever, by furnishing morbific miasmata, similar to those, that on land arise from marshes when exposed to the influence of the higher degrees of atmospheric heat.

As might have been anticipated, yellow fever broke out in the "Regalia" with such violence that the men continued to fall ill, one after another, on the passage, until all except one boy had been attacked, and five out of twenty-one died, before the arrival of the vessel at Barbadoes, and on her arrival there almost every one was seized with fever that came on board to supply the places of those that had perished.

Dr. Dunn an eminent practitioner of Kingston says: "That so frequently has the occurrence of yellow fever been observed to take place on board vessels in Kingston harbor, when they took in foul shingle ballast from the shore at or near the wharves where there is always an accumulation of filth and refuse, that of late years they have been required to proceed to the opposite side or the harbor for ballast when necessary.

Again, there is an universal concurrence among the medical officers who are acquainted with the station, that one of the chief causes of the peculiar liability of the garrison of St. Ann's, Barbadoes, to yellow fever is, its low and marshy situation, which according to Dr. Davy, Inspector General of Hospitals, contains and has in its immediate vicinity more swamps and lands liable to be flooded, and take on the temporary feature of swamps than the whole of the rest of the island together. Dr. Checvin states, that the main causes of the epidemics which have ravaged Barcelona, are, the masses of corrupt matter from manufactures, slaughter-houses, and wash-houses, forming as they do a pestiferous accumulation of sand, mud and filth. Dr. McLean says, the committee of fifteen physicians of Barcelona concur with Dr. Chervin.

All classes of witnesses concur in stating that previous to the outbreak of the epidemic of 1828 at Gibraltar, the drains both private and public were in a most defective and offensive

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condition. Dr. Bene after many years service between the tropics gives the following receipt for the sure and rapid production of yellow fever.

"Take of soldiers, lately arrived in the West Indies, any number, place them in a barracks in a low, wet situation, or in the mouth of a gully, or on the brink of a dry river, or on the summit of a mountain, and to leeward of a swamp, or of uncleared ground and where there is no water, or only bad water, &c. Let these directions be attended to in Trinidad, or even in Barbadoes, and especially where the air is stagnant or charged with noxious vapors subsequent to a long drouth, the soldiers will soon die—some of them with yellow—some of them with black vomit—some of them with yellow vomit. What can this mean! Can it mean any thing else than some will die of the common bilious fever, others of the aggravated variety of the disease.

Again, says Dr. Blair, who has often been quoted on the opposite side, "the way to give a yellow fever nurse the yellow fever, has not been by bringing him in close contact with the sick, but by discharging him or her from the hospital, after knocking about town for a few weeks, and getting into the malarial districts, he or she would, it is likely, be brought to the hospital as a yellow fever patient. Several nurses discharged for bad conduct, suffered in that way."

Dr. McLean says, the same cause, producing remittent fever, will, in all seasons, produce yellow fever. I might employ the entire evening in citing authority on this subject, but it is unnecessary further to trespass upon your time. I will, therefore, pass to the next proposition, vi: the onset and progress of the disease.

Under this head, Dr. Lloyd fifteen years a resident of the West Indies. He says: "during this period I have seen from 1300 to 1200 cases of yellow fever, I class yellow fever under the head of aggravated remittent. The general symptoms were preceded by short and separated rigors, a sense of lassitude and uneasiness of the limbs, head-ache, nausea, sometimes amounting to vomiting; increasing temperature of the skin, and in young soldiers fulness of pulse, violent action of the carotids and temporal arteries, flushed countenance, dryness of the mouth and fauces, pains in the limbs, occasionally alternating with frontal head-ache; the latter symptoms amounting to excruciating pain of the loins and forehead, &c. In the progress of the disease, slight remissions were to be discovered by an acute observer, these remissions were characterized by the heat being diminished and the skin becoming slightly moist; the tongue also, which, in many instances, exhibited the appearance of uncooked beef-steak, accompanied

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by a slight degree of moisture of the fauces. These remissions varied from half an hour to two hours.

Mr. President, is not the picture here drawn complete, yet he does not say a word about the Muscova duck's eye. Can it be possible this man is describing our ordinary remittent fever? Certainly he has not lived in the West Indies fifteen years without seeing a case of yellow fever; yet it is hard to realize that he is drawing a sketch of that terrible complaint, and yet, he does not say a word about that "*something*," that characteristic something, which some men have seen but cannot describe.

Dr. McLean says, in the early stages of both diseases the fluid vomited are nearly the same, with the exception there is less bile in yellow fever. During the prevalence of yellow fever, remittent fever prevailed in the garrison—thinks the same causes producing remittent fever in an old resident will produce yellow fever in new residents. With the addition of the black vomit, thinks the remittent in the Mediterranean would approach in appearance yellow fever, the morbid appearance resembling those in yellow fever. Does not think there is any difference in the color of the liver in fatal cases of remittent and yellow fever. Does not think he could, on admission, designate in cases between remittent and yellow fever, but thinks, before a patient with fever is twenty-four hours in the hospital, he could decide whether it was a case of remittent or yellow fever.

And how? let us see. Why, says he, in remittent before this period, they would show a disposition to remit. In yellow fever remissions he considers are not so defined. Some of the cases, he adds, sent to the hospital from camp were considered pure remittent—they having had distinct remissions.

Dr. Kelly says, in yellow fever, there is a peculiar aspect of the patient, and an unwillingness to enter into explanation, whereas in remittent the symptoms are more developed; there is a decided pain in the head and the patient shows less disposition to explain his condition, and considering the symptoms of yellow fever owing to the greater depression of the vital powers, and to constitute a disease of more aggravated nature than remittent—the proportion of deaths being also greater. With the exception of black vomit and the softening mucus membrane of the stomach there is no morbid difference between the two diseases. Dr. McLean, whom we have already quoted, says, he found the mucus coat of the stomach pulpy and denuded in fatal cases of remittent, so there is nothing now left but the black vomit to distinguish the two diseases.

Dr. Hawkey (six years) says, "on all occasions, when I

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witnessed yellow fever prevailing at Jamaica, there also prevailed the common remittent, I have never seen any case of fever in the West Indies which I consider a continued fever. I could diagnose a case of yellow fever which would depend chiefly upon the peculiar expression of the countenance and the hollowness of the eyes. But there are cases of yellow fever where this peculiarity does not occur at the onset."

Dr. Connel (seven years) says, "I consider all the cases of idiopathic fever that I saw in the West Indies were remittent fevers."

Dr. Millengen says, "I am of opinion that this fever, yellow fever, was decidedly different from the remittent fever." And why? *the fever* throughout its course "*seemed different*" and in yellow fever there is a peculiar smell. He believed the fever contagious.

Dr. Webb says, I consider yellow fever and the ordinary remittent, specifically different. And why? In remittent fever rigors usually usher in the disease; in yellow fever rigors do not *generally* occur; *the patient only experiencing slight chilliness.* The appearance of the countenance is different in the two diseases, the exact difference cannot be conveyed by language, but I think I could always discover the disease by this peculiarity. The eyes present the appearance of a drunkard's, (the Muscova duck eye, we presume). He also perceived that *peculiar something*—yet, he says nothing about the smell.

As much has been said about the opinion of Sir Wm. Pym, it may not be amiss to notice somewhat in detail the reasons he has presented for believing yellow fever specifically different from remittent.

Reason, 1st. Yellow fever differs in its progress.

Here of course we cannot take issue with the venerable knight of quarantine; for he admits just what we contend for, believing as we do that yellow fever is aggravated bilious fever, of course we would expect it to be more "rapid in its progress" than the milder forms of the same disease. Certainly, no one would pretend, that, because a particular case of disease run its course in five days, it differed specifically from another of the same class which required six days to complete its stages.

2d. Reason. There is no remission *although there may be occasionally alleviation of symptoms.*

Now, if the evidence of men is worth anything, I think we have shown conclusively that yellow fever is not necessarily a contiued fever. Dr. Rush, Dr. Lewis of Mobile, Drs. McLean, Lloyd, Webb, Chervin, Bradford, Jamison, Bone of the West Indies, and a host of men, establish beyond the shadow of a doubt, that the so-called yellow fever is a remittent fever. Nay,

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more, even Sir Wm. Pym admits an alleviation of symptoms. And what is the reason he does not come out like all the rest and say it is distinctly a remittent disease? Simply, because it does not come up to his arbitrary standard of a remission. What is his standard? To constitute, he adds, the genuine remissions of which I have spoken, I consider it necessary that there should be a great diminution of the febrile symptoms, the exacerbations following, ushered in by chills, sometimes rigors, with a return of the sickness and vomiting. With this standard, I ask, in how many instances would he be willing to allow a remission even in the mild fever of our latitude. The febrile symptoms must be greatly diminished, the exacerbation ushered in by a regular shake, and then if your patient does not puke he has had no remission; it would be folly to comment upon such reasoning as this.

3d. Reason. The yellow fever unlike that which exists only in healthy situations, prevails in all situations, as well as at all seasons of the year. We confess, we do not understand exactly what the old gentleman is after here. If the disease exists every where and under all circumstances? Perhaps, he means, that yellow fever *would* prevail every where and in all seasons but for quarantine; yet such are not his words. In short, we begin to suspect if the subject bo pursued much farther that it will appear that the difference between us consists in bold assertion rather than in substantial reasoning; that remittent fever prevails in healthy situations is assuredly a fact. But it is equally true, that it is common in localities apparently healthy, and further, it is not confined exclusively to any particular season. Then, if yellow fever may prevail in all situations as well as at all seasons of the year." Does not the fact tend to establish the relationship. In other words, does not reason 3d, consist in making a distinction without a difference.

Reason 4th. One attack makes the human frame proof against a second in the same degree, as small-pox.

The question again arises, what is yellow fever? in what particular does it differ from remittent fever so-called? we have labored throughout this paper to show that the authors of a specific difference have not pointed a single distinctive mark, that it was impossible to diagnoticate between the remittent and yellow fever. This being established, what becomes of this assertion. We do not believe a man is likely to hava *black vomit* more than once or twice at any rate—and why? 1st. Because in 999 cases out of 1,000, the result will be death; and 2d., the same cause producing a very severe fever the first season, will, on the second or third produce no effect at all or only a mild attack.

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Again, the fact of recurrence of ordinary intermittent fever is proverbial, whilst with remittent fever, such occurrence is comparatively unusual. Is it not reasonable then to presume, as we ascend on the scale of gradation there will be proportionate increase of immunity. Perhaps one of our opponents may say, one never has that peculiar appearance, which he cannot describe but once; or perhaps another will contend that a man cannot have the Muscova duck eye but once; or probably one of the authors quoted believes the *peculiar smell* can occur but once. If so, I have only to say the age of such philosophy has now passed away. The countenance of reason has long since been frowned upon it—red eyes, peculiar appearances and bad smells being so common in all diseases as to be a distinction of none.

Reason 5th. A marked difference also in the two diseases is the increased action of the liver in the remittent, and the apparent total want of secretion of bile in the yellow fever throughout the disease, that is, that in the bulam fever in a severe form, the liver soon loses the power of secretion.

The total want of secretion of bile in the severe forms of bilious fever is precisely what we should expect, and for what reason? Simply, because of the extreme sanguineous congestion which must take place in these cases.

In remittent fever, says Dr. Pym, there is increased action of the liver. Does not this augmented secretion imply preternatural accumulation of blood in the liver? Most assuredly it does, but the determination being moderate, not sufficient to interfere with the function of the organ, increased secretion suffices to bring relief. But suppose this congestion to be extreme, as we have every reason to believe occurs in yellow fever, the function of the liver is annihilated, the secretion of bile may go a little while but must soon cease altogether—and why? because the engorged capillary blood vessels obliterate by pressure the capillary biliary ducts, thus arresting the flow of bile to the larger ducts, and through the common duct into the bowels, producing what Mr. Kiernan calls biliary congestion. In the event of death during this stage, that is, before hemorrhage or black vomit takes place, the liver is invariably found gorged with blood and bile; but as these violent cases generally have hemorrhage before death, the liver is found usually in a state of biliary congestion, simply the cell structure and minute biliary tubes being overcharged with bile, presenting that peculiar appearance described as straw color, the sanguineous congestion to which it had been so recently subjected having passed off in the form of hemorrhage, black vomit or both. Dr. Pym says, distinctly, that it is only in the severe

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forms of Bulam fever the liver loses or seems to lose the power of secretion.

It now remains for me to show, that black vomit is not peculiar to yellow fever—the wall of partition will be broken down.

Surgeon Parry, (seven years resident in the West Indies), speaking of an epidemic in 1821, says: The 63d regiment suffered from a mild form of bilious remittent, which being aggravated as the season advanced; that fifteen deaths occurred, the *majority with black vomit.*

Dr. Authur says, speaking of a severe visitation of remittent fever, when from sixty to one hundred cases were in the hospital at the same time. I recollect some cases *had black vomit*, and one in particular was taken very ill in the hospital, and on examination, I found on the matress on which he was lying marks of the black vomit, which was black vomit from a former patient who had died shortly before, I could not account for the aggravation of the disease. He believes the specifically different diseases.

Dr. Jameson, (twelve years a resident in the West Indies) says, I have repeatedly seen cases of complicated intermittent fever terminate fatally. In these cases there was black vomit found in the stomach.

It is unnecessary to comment upon the evidence adduced to prove the specific nature of yellow fever. All agree that it is produced by the same cause producing remittent; not one has been successful in pointing out a single distinctive symptom during its progress and as for *black vomit* none believe is essential to yellow fever; and further, we have proven it occasionally occurs as the termination of remittent fever.

Article II.

Case of Dislocation of both Thigh Bones with laceration of Ilio-sacral Ligaments and Displacement of the right Os-Innominatum. By Jno. I. Hodgen, M. D., *Professor of Anatomy in the Medical Department of the University of the State of Missouri.*

I was called on the 24th of July, 1854, with Drs. Norris and Seeley, to see Robert Torry, and found that, in attempting to stop a pair of horses that were running with a wagon, he was thrown down, and in endeavoring to get out of the way of the wagon, had raised on his hands and knees, when the wheel striking him between the legs, behind, cutting the scrotum, and passing over his sacrum, crushed him to the earth.

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We found him laying on his back, the right thigh flexed at right angles to the trunk, the knees thrown out, and the foot still farther out. The right trochanter was felt with some diffiulty, the head of the thigh bone was pretty easily detected over the ischium just above the tuberosity, probably resting against the spine, but not in the sacro-scialic noteh. The thigh could not be moved without giving great pain. The left thigh, was more flexed than the right, and more widely separated from the medium line; the foot was turned inward, the trochanter was more deeply situated than usual, the head of the bone was easily felt to the left of perineum, opposite the thyroid foramon, but not forced into it. This leg like the other could not be moved without great pain.

I fixed a sheet between his legs and over the hip for the purpose of counter-extension, I tied a sheet around the thigh above the knee, and to it fixed a pully; then extended a clothes-line that was also attached to the sheet, to another pully placed above and in front of the patient, and back again to the pully which was attached to the sheet, I then passed a towel on the inside of the thigh, close to the pelvis, and gave it to two assistants and ordered an assistant to keep the pelvis from being raised by the pullies. Dr. Norris gave the patient ether, and we began the extension; when the muscles were somewhat relaxed, I directed the assistants to draw the upper part of the thigh outward, and then diminishing gradually the extending force, the head of the femur came opposite the cotyloid cavity, and we allowed it to slip in by diminishing the lateral force and turning the foot outward. In five minutes the thigh was all right, and the limb moved freely and smoothly in any direction.

The right being treated in the same way, came pretty well into its place, and moved smoothly in its socket. I passed a broad bandage around both hips, and ordered strict rest. The patient appeared well and was free from fever during the whole course of subsequent treatment.

On the second day I observed that the right leg appeared longer than the left, and that the toe turned out. On the third the deformity increased, that on the fourth there was a difference of 1¼ inches in the length of the limbs. Coming to the conclusion that the bone must have slipped out, I resorted to the pullies, and found that by making lateral extension and then forcing the knee upward, I could bring the thigh apparently to its proper place.

Thinking that possibly the cotyloid ligament was lacerated, and a deposit had been made in the joint, and that the femur had gradually slipped down as described, I applied a splint along the leg extending above the hip, with a foot piece, so

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that by applying a strap over the opposite hip I could keep the leg in its proper position. This answered the purpose admirably. But in a few days, it became so painful from the pressure of the band upon the left hip that the patient's mother loosened it. On the day following I found the leg longer, on the following day still longer, and on the third day there was about 1¼ inches difference in the two legs. Again I put the limb in place, and applied the splint more loosely. He bore it pretty well this time but the limb was still longer than the other by ½ or ⅝ of an inch. After some two weeks the splint appeared to be of no further service, and I removed it.

Meanwhile a brother of the boy passing through Jacksonsonville, gave Dr. Prince a history of the case. Dr. Prince wrote requesting me to place the boy on his back, draw a tape from the top of the sternum over the umbilicus and pubis to a point midway between the internal maleoli, and then compare the length of limbs, I did so and found the maleolus of the right limb one inch lower than that of the left, with the toe turned outward—still the motion of the limb was free, smooth and easy, though not as extensive as natural. I then placed one limb of a carpenter's square on the tape as it was stretched from sternum to maleoli, and found the anterior superior spinous process of right ilium $\frac{13}{16}$ of an inch longer than that of the left. In the same way I drew a line from the spinous process of the seventh cervical vertebra over the first lumbar to the first sacral spinous process, and found by applying the square as before, the posterior superior spinous process of the ilium of the right side ⅜ of an inch lower than the left—this measurement could not be so accurately taken as the points could not be as definitely fixed. From the anterior superior spinous process of ilium to the trocanter major was 4½ inches on both sides. From symphysis pubis to the lower part of the internal maleolus of the right side was 28 inches, left side 27 inches. From the anterior superior spinous process of the ilium to the lower part of the external maleolus of the right side was 31⅜ inches, of the left side 31¼ inches. From the fissure between the nates to the surface of the skin covering the trocanter major of the right side 5¾ inches, left side 5¼ inches.

On the 1st of October, two months and a half after accident, the boy is going about without crutch, or cane, and limps very little.

In this case, the thighs were both certainly dislocated, and are now in their proper sockets.

Now, how are we to account for the measurements above given? In addition to the dislocation of the heads of the bones, there must have been a laceration of the ilio-sacral liga-

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ments, and displacement of the os innominatum of the right side. There could have been no fracture, as their was no crepitation, though the ilium appeared to move back and forth when force was employed. I made little dots with ink, both before and behind over the spinous processes of right and left ilia and found, that when I drew downward on the left, and forced the right leg upward, that they (the dots) were brought opposite each other. In order that the slipping of the skin in making the extension should not cause this appearance, I took hold of the ankles, and not the knees. I cannot account for the anomalous features presented, except by supposing the sacro-iliac junction to have been ruptured, the innominatum of the right side to have twisted on the pubis as a pivot, thus causing a descent of the coty-loid cavity, and elongating the extremity—this turning would bring the acetabulem between the anterior superior spinous process of the ilium and the foot—so that the last points would be farther removed from each other, and give the increased length shown by the measurement from ilium to maleolus, and also account for the greater disparity in the length of two limbs as taken from the ilium and pubis.

In our works on surgery, we are told, that the head of the thigh, when dislocated, may occupy five different positions. They go into a detailed account, of the changes effected in the length of the limb, directions of the toe, &c., and all under the supposition that the limbs are in the line of the body and extended. We are told, that when the head of the bone is in the sacro-sciatic notch, that the limb will be lengthened and the toe turned inward; when in the foraman thyroideum, the limb is lengthened and the toe turned outward.

Now, it does seem to me, that almost invariably, in dislocation in these directions, the limbs must assume the same position as in the case above given; and why, we have our attention so particularly called to the length of dislocated thighs, I cannot for my life imagine, when it would be impossible to take any thing near an accurate measurement.

Article III.

Compound Dislocation of the Ankle Joint. By S. G. J. DeCamp, *Surgeon United States Army.*

Bridget ———, a servant girl in the family of Maj. Sprague, U. S. A., at Fort Columbus, New York Harbor, while washing paint in the Major's quarters on the 30th September, 1853, fell, and her right foot catching in the lower opening of the

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steps, a compound dislocation of the ankle joint took place inwardly. The wound of the integuments was three and a half inches long—the end of the fibula protruded, and also that part of the astragalus which unites with the scaphoides, that bone having turned upon its own axis. In consultation with Assistant Surgeon Josiah Simpson, U. S. A., it was thought advisable to make an effort to save the foot although the extent of the injury afforded some reason to fear that amputation might ultimately become necessary. I removed the astragalus after which there was no difficulty in bringing the foot into its proper position.

The soft parts were united by sutures and adhesive straps and the foot was supported by two splints and a roller. On the fourth day I dressed the wound, at which time the discharges were thin and offensive. An echrymosis formed on the inner ankle, which I opened. In a few days the discharges from both wounds became healthy and the case indicated a favorable result.

On the first of March, the wounds were nearly closed, and there was some motion in the joint. Soon after this time it became necessary for her to leave the quarters of Maj. Sprague, and she was taken to the New York Hospital. I visited her often, the last time, about the first of July, when she had commenced walking with the aid of a cane, a false joint having been formed with a very considerable motion of the foot.

Article IV.

Yellow Fever in its Relations to other forms of Fever. Read before the St. Louis Medical Society. By Wm. Webb, M. D.

At the last meeting of the Society, I presented, in a very general way, some facts and reasons, based upon the history and pathology of the so called malarious diseases which, I endeavored to show were quite sufficient to satisfy us, that the only *sine qua non* for their production is, *a high degree of temperature with unacclimated blood.*

I propose this evening to examine more at length into their identity, to see, if, from a comparison of its symptoms and pathology, yellow fever be essentially different from the other climatic diseases, or in other words, a disease *sui generis;* and also, if heat and unacclimation, be not the only *sine qua non* for its production.

You will remember, that I based my conclusions on facts that were undisputed; namely, that these diseases prevail in hot climates, and that the foreigner is attacked in pref-

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erence to the native; that it is a fact beyond cavil, that less carbonic acid is given off from the lungs at a higher than at a lower temperature; that the liver under these circumstances being a supplimentary organ to the lungs by the elimination of hydro-carbon in the production of bile, is consequently forced to do double work; that we would of course, if the cause continue have the liver congested, and materials that should be consumed in the production of bile retained in the blood; and also, ingredients that should be furnished by the bile for healthy nutrition, thus becoming deficient, disease must inevitably ensue.

To go into an examination of the contagion and importation of yellow fever at any length, would, I conceive, bean unnecessary consumption of our time. These questions may now be considered as definitely settled, as it has been over and over again proven, and is as susceptible of demonstration, as any fact that depends upon experience and observation can be. The numberless instances both in this country and in the tropics, where yellow fever has occurred without the possibility of its having been brought from abroad, are, I think, sufficient to demonstrate its spontaneous origin in the localities where it has prevailed. I will merely give one instance—Dr. Garvin in describing an epidemic that broke out in Demerara, states, "that cases of the disease occurred in the town before any appearance of it among the shipping; and that some seamen arriving from Europe were attacked with yellow fever on nearing the coast and getting into muddy water, some days before their arrival in harbor, and who had no communication with aught else but the skies and seas and their own vessel."

Before going into an examination of the symptoms of yellow fever, we merely wish to advert to a fact that any one may satisfy himself of by referring to the history of any epidemic of yellow fever, either in this country or abroad; that at the outbreak of the disease, the greatest discrepancy of opinion exists among physicians of equal ability, as to whether it be really yellow fever or the ordinary fever of the climate. It really is amusing, to see what a contrariety of opinion exists, when epidemic yellow fever breaks out. One thinks that the skin is too yellow, another not quite yellow enough; one that the vomit is too black, another not quite black enough; one that the eye is not exactly the Muscovy duck, another that it is; one that it is not exactly like the old epidemic, that he can't tell what is the difference but the "peculiar expression" is wanting; and so on until "confusion becomes more confounded."

And, sir, if this question were to be decided by the mere weight of authority, we could point out to you, and that too,

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upon the authority of such men as Rush, John Hunter, and a host of other equally eminent observers, how, that during epidemics of this disease they have seen intermittent, remittent, and yellow fever, run into each other; how they have seen the certain end in black vomit; and a fever with eye suffused with blood end in a quotidian and be cured with bark; how they have observed the deepest yellowness of skin in the remittent fever; and again, where they have seen fatal cases with black vomit, and yet the skin did not turn yellow. And might point out, where in the same barracks or hut, and where there could not be the slightest doubt as to the existence of the same morbific agent, yet so modified by exciting physical causes connected with the patient as to appear quite different diseases and require different treatment. And what does the epidemic of last year in the south teach us? Does it not speak out in a voice not to be misunderstood, that yellow fever, at least, cannot depend upon any known local influence for its production? For, it has prevailed upon every variety of soil, the alluvial, diluvial and tertiary formations, upon the low undulating hills, bluffs, elevated plateaux, along rivers, lakes, bays, swamps, canebrakes, and sandy plains, among the pine, oak, and magnolia forests, in filthy, damp crowded houses and alleys of cities, and the highest, dryest, cleanest villages, in fact, the very spots, designated as retreats from it, suffered most. Does this not, and forever put a quietus upon marsh miasm as the "specific cause" for the production of this disease, or any other malaria depending upon any known cause.

It has been asserted by gentlemen of authority, "that they could, in any given number of cases, point out yellow fever from the ordinary types of the disease." Grant this for argument sake. Cannot this be explained upon the same principle as that of the different types of the other diseases. Take any of the exanthemata, measles, for instance: have we not all seen epidemics of measles, one season, that differed materially from that of another? Suppose you were at this day of steam to take a patient suffering from an attack of the sthenic form of measles with a bright florid eruption, and convey him several hundred miles to a locality where there are circumstances to modify the disease so as to have produced an asthenic variety with the pale livid eruption. To the unprofessional eye, would their not here be two different diseases, and would they not be two entirely different causes invoked to account for the production of the two types? and yet there is no contrariety of opinion in the profession, as to the identity of cause in the production of the two types of measles. It is a fact well established, that epidemics of one season assume a very different character from what they do at another, and that

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in different localities during the same season they possess different types, so much so, that as I have before stated, at the outbreak of an epidemic great discrepancy of opinion exists among observers as to whether it really be the yellow fever or no. Let us take a case of yellow fever from a locality where it is at present prevailing and remove it to a distance where there is an epidemic of another class of these diseases, or it may be of the genuine yellow fever, but where the modifying circumstances are changed. Would you not expect to find as different a type as you would of measles in the other case, and the identity of the proximate cause quite as inexplicable in the one as in the other? And I would here remark, that in investigating this subject, we should not be guided by the course and symptoms of a single epidemic, nor draw our conclusions from the few cases we have seen; but we should look into the history of yellow fever, study it in the camp and the city, upon the land and sea, in the tropics and the temperate regions, its modifications by time, place, and circumstance; for, have we not seen it presenting in its late fearful ravages what would have been heretofore considered anomalies in its history?

Let us now turn our attention a little more closely to the nature of yellow fever and its kindred maladies, and see if from the *ensemble* of symptoms and pathology they may not only be of the same family, having the same proximate cause for their production, and that cause heat and unacclimated blood. It will not be denied, I presume, that heat will produce hyperæmia of the liver in a way that it is not necessary at present to stop to enquire. What then follows, hepatic congestion, the cause still continuing. Will not the portal circulation also be deranged, and congestions inevitably ensue, and so on, until we have a general congestion of the internal organs? Would not there be every form of nervous derangement following, and by the abstraction of blood from the surface would you not expect chilliness, and ague? A return from this state, now commences re-action—the circulation is quickened, heat of skin—fever. What now takes place? How is nature going to restore the equilibrium? Will it not be by the secretions and excretions? The urine that has been scanty or suppressed is again restored, the skin that was hot and dry is now acting freely—sweating. What would we call a disease with first a chill, then fever, then sweating, with an intermission in the paroxisms—intermittent fever. Let us now proceed a step farther. Heat, I presume it will not be denied, produces bile, a superabundance of which being formed, passes into the duodenum, bilious diarrhœa follows, a quantity getting into the stomach excites vomiting, cholera morbus then would be the result. The causes still continuing, you will

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have congestions producing fever. What would we call a fever with bilious diarrhœa, bilious vomiting, with remissions in the paroxysms? Bilious fever. Still farther, the stomach irritated from materials foreign to it becomes congested, fever, blood vessels are ruptured, blood poured out, black blood, black vomit; liver congested, hepatic functions deranged, bile formed either too fast or unnatural biliphœin circulating in the blood, yellow skin. What do we call a disease with a high degree of fever accompanied by yellowness of skin and black vomit? Yellow fever. Suppose we should now take a *coup d'oril* of the phenomena presented by the combined action of the predisposing cause, unacclimated blood and heat. The liver becomes congested with a peculiar kind of blood, derangement of its function takes place, materials circulate in the blood which should have been consumed in the production of bile, the blood becoming greatly vitiated, deranged nervous actions of every kind will certainly follow, bile circulating produces yellowness of skin, congestions followed by fever and black vomiting ensue, and thus we have all the symptoms of the most malignant types of these diseases following the same first cause. And I would here ask if there is any one symptom pathognomoni of any one form of these diseases? Is it the chilliness of surface? yellowness of skin? black vomit? Have we not stated before upon undoubted authority, that, during epidemics of the different forms of these diseases, symptoms of every variety have intermingled and commingled, so that it was impossible by any one in particular to designate the particular type? I have now passed over in a very cursory manner some of the most prominent facts and arguments to establish the identity of yellow fever with the other diseases of that class. We could not, of course, in a paper of this character go at length into an examination how their many modifications would be affected by the different states of the individual and the surrounding circumstances—and what are the causes of epidemics. We have merely hinted at how these things may take place, and given our reasons for attributing the same prime cause for the production of them all. And we would now ask if, from a candid consideration of all the facts, we have not a just ground for such a verdict, the great similarity, may we not say identity of symptoms, so similar indeed as to non plus the Hectors and Achilles of the profession themselves in making out a diagnosis; the same pathological states presented by the different varieties only differing in accordance with the phenomena presented in each type. And have we not seen how heat and unacclimation can develop every symptom and produce every pathological state? May we not then with some assurance, at least, contend that

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heat with unacclimated blood is the only *sine qua non* in the production of these diseases, and that the different forms are but different types, modified by existing circumstances.

In conclusion, I wish to state, that I am aware that I may be justly charged with having been very positive in my assertions, and dogmatical in style. I know that there are men in the profession, men equally clear-headed, who differ widely from many points discussed in this paper, and that it would be a great assumption in any one to arrogate to himself that he is the *Magnus Apollo.* If I have spoken strongly, I trust it has been from no assailing spirit or want of deference to the opinions of others, for whom I have every respect, but because I have been impressed with their truth and did not wish that the facts should fall short of the proper construction and consideration to which I considered them entitled, I therefore ask for them but a candid examination, quote enquiry, and challenge criticism. If the doctrines advanced be true, they stand. You can take from them nothing but error.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

PART II.

Article I.

Principles of Comparative Physiology. By W. B. Carpenter, M. D., F. R. S., F. G. S., *Examiner in Physiology and Comparative Anatomy in the University of London; Professor of Medical Jurisprudence in University College; President of the Microscopical Society of London, etc., etc. With* 309 *wood engravings. A new American from the fourth and revised London edition. Philadelphia: Blanchard & Lea*—1854—*pp.* 752.

Dr. Carpenter is so thoroughly identified with physiology, both human and comparative, and his works are so familiar to every cultivator of medical science, that it is only necessary that the public should be informed of his connection as author of a work on any one of these important subjects, in order at once to give it character and standing. No one man has contributed so largely as he, to the present advanced state of physiological science, or done so much to bring it prominently before the profession as a study of primary importance.

The first edition of the work before us was issued from the English press, in the year 1839, from which period up to

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the year 1851, three several editions were called forth by the demands of the public. Neither of these editions, however, were republished in this country—so that the present, which is from the fourth and revised London edition, is the first which has appeared on this side of the Atlantic.

In its broad scope, the work is designed to embrace, and in point of fact, does contain, a complete review of the physiological relations of the animal kingdom, setting forth in a clear and condensed form the most recent and reliable views, together with the prominent facts, gathered frow all the best authorities bearing on this interesting branch of science.

In this intensely scientific age, when the whole arcanum of nature is undergoing a thorough exploration—such a work can hardly fail to command the attention of scholars, and meet with a ready sale. Men of real science will consult it from an inherent interest in the subject itself, while others of an opposite character will be no less eager to consult its pages from no other motive than those of mere curiosity.

It is the author's intention, as he informs us in the preface, to follow this work with a new edition of his work, on Genera Physiology—thus bringing up both these departments to the present advanced state of physiological science.

So far as the literature of the work is concerned, it is only necessary to say, that it is written in the author's best style, while the illustrations which are numerous, (309) are executed in a manner which reflects credit on the enterprise of the publishers.

Article II.

Of the Nature and Treatment of Child-Bed Fevers, in a series of Letters to his Class. By Charles D. Meigs, M. D., *Professor of Midwifery and the Diseases of Women and Children in Jefferson Medical College. Philadelphia: etc., etc. Blanchard & Lea*—1854—*pp.* 362.

In spite of the strictures and hyper-criticisms of censorious reviewers, Dr. Meigs must still be regarded as one of the most popular American medical writers. Nor is this to be wondered at. No man in the United States has ever enjoyed more ample faculties for observing the diseases of women, nor has any one, as we think, better improved the opportunities afforded him, than Dr. Meigs. In the work now presented to the public, the author has chosen a most important and fatal class of diseases—one about which there is still a great diversity of opinion among medical men, both as regards their nature, cause and treatment, notwithstanding all that has been written in

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reference to them. We are, therefore, among the number of those who hail with pleasure this new work from Dr. Meigs' pen, and only regret to be informed by him that it is probably the last that he will ever present to the public.

The author has adopted his favorite but peculiar plan of presenting his views in the shape of familiar letters, addressed to the students of his class. The work is therefore divided into twenty-nine letters or chapters, in which are discussed all those deeply interesting subjects, usually embraced under the general demonstration of puerperal fever. We cordially recommend it to our readers as a work abounding in practical good sense, and sound pathological and therapeutical views.

Article III.

On the Construction, Organization and General Arrangement of Hospitals for the Insane. By Thomas S. Kirkbride, M. D., *Physician of the Pennsylvania Hospital for the Insane. Philadelphia: Lindsay & Blakiston*—1854—*pp.* 80.

For the last fifteen years Dr. Kirkbride has occupied the position of physician in chief to one of the largest and best arranged Insane Asylums in the world, and during all that time he has devoted his unceasing attention to the study and investigation of mental diseases, as well as the best method of relieving them. He may therefore be presumed to have a thorough knowledge of the subject of which he treats.

The successful treatment of insanity is so essentially dependent on the construction and general arrangements of hospitals designed for the relief of this painful malady; that the subject commands itself with peculiar force, not only to every physician, but also to every one who has a heart capable of being touched with a feeling of sympathy for the misfortunes of mankind.

The author goes into a minute statement of all the various arrangements and complicated appliances, necessary to render hospitals for the insane available for the great and human objects for which they are founded. No one who has charge of such establishments, or who undertakes to treat insanity should fail to procure and carefully read the work.

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PART III.—RECORD OF MEDICAL SCIENCE.

Varicose Veins and their Treatment.—Immediate Circumscribed Compressive Method of Delpech.—This operation has for its aim the obliteration of the varicose veins by flattening them crosswise, and inflaming the walls both inside and out. The illustrious surgeon of Montpellier thought that the obliteration was caused by an effusion of coagulable lymph, and of pseudo-membranous formation. We believe here in pure adhesive inflammation, which would be of secondary importance if the method was good. The following is the method of proceeding:—

The patient being laid horizontally, a transverse perpendicular plait is taken in the tissues in the direction of the varicose vein. The plait is then opened by a single incision to the base; this forms an incision an inch long, parallel with the vein, around which you dissect with great care. A strip of lint half an inch in width, and two inches in length, is then passed under it, and the ends are secured on each lip of the wound by means of adhesive straps.

The wound thus dressed soon suppurates; the dissected vessel, sustained by the lint, becomes red and covered with healthy granulations, and is finally entirely obliterated. The lint is then withdrawn without difficulty. (They do not say after what length of time.)

As soon as the lint no longer supports the vein it forms itself into a solid bridge, which eventually disappears. By the tenth day the wound is cicatrized, and the vein hid under the cicatrix. According to the author of the dissertation, this method has the advantage of producing a *phlebite*, which is as much to be dreaded in this as in any other operation of ancient surgery, and we are a little incredulous on the point of ten days being sufficient for the whole treatment.

M. Gaspard adds, that he has witnessed at *l'Hospital Saint Eloi*, several very curious observations; but he does not relate any, and contents himself with telling the history of an operation for variocele, which was cured, but without throwing much light upon the method. There is nothing said of the accidents, results, drawbacks, or number of operations. It is distressing that such incomplete documents should be so common in the annals of science. Besides, we know that at Montpellier, even, the method of Delpach has not survived its creator.

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Temporary Ligature.—The ligature can cause the obliteration of the vein without the division of its walls, and by a process analagous to the preceding method. That is to say, by inflaming the cellular tissue which surrounds the vessel, by provoking an exterior phlebite, which spreads to the interior, brings on adhesion of the walls, and undoubtedly, also, the formation of hard clots of blood.

If the ligature is very light, the coats of the vessel are plaited and partially in contact, and the phlebite is undoubtedly rendered easier. I have often repeated on the dead body the ligation of the thick-coated veins, as the saphena, the superficial veins of the arm, and the deep-seated abdominal veins, and have distinctly seen the thread divide the middle coat only, the inner and the outer coats resisting very well the most energetic compression. The result is opposed to what the classic authors say, and proves most incontestibly that the *integrity* of the veinous wall depends very much on the ligature: it is very probable that if the same operation be made on enlargod varicose veins, the disorder must be greater. I can understand, then, very well how the thread tightly drawn and left in place even for a very short time, can destroy the vein.

M. Davat, in his practice, had already seen obliteration produced without division of the vessel. A vein was tied moderately tight with an India rubber ribbon, and the wound reunited. On the nineteenth day an abscess formed, upon opening which the India rubber ribbon was found floating in the suppurative matter; the vein was thickened, but not divided; the foreign body was removed, and the wound healed, but the vein remained impermeable.

The experiment was, I believe, made on an animal, but the temporary ligature has also been applied to man.

Method of Freer, of Birmingham.—This method consists in binding the vein tightly with a thread. According to the remark of Hodgson, when a vein is tied by a thin ligature, the internal coat of the vessel is lacerated, inflammation follows, and if the opposite walls of the tube are kept in contact by the compression, then adhesion is obtained very quickly.

The operation in itself is, therefore, similar to other methods of obliterating the arteries by breaking the inner coat, and without leaving the foreign body in contact with the vascular tube.

This method has been, to my knowledge, very rarely employed. We find a detailed account of it in Hodgson's work, communicated by Freer, of Birmingham, which we give below. The case was that of

"A woman, aged fifty years. Had an inveterate ulcer on

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the right leg, above the tibio-tarsal articulation—veins of the leg and foot varicose. A ligature was applied to the internal saphena vein a little below the knee. Four hours after there was violent pain in the left side of the chest, breathing frequent and laborious, difficulty in speaking, and vomiting of blood. There was no pain, however, in the leg. Pulse 60. Took fourteen ounces of blood; symptoms better, but re-appeared, more aggravated, in four hours after. Ligature removed, the symptoms decreased immediately; the pulse rose again; another vomiting of blood, and palpitations.

"On the fourth day, pain and swelling of the knee, which disappeared on the 6th; cure of the ulcer and wound from the ligature on the 15th, but in a vertical position the veins had become enlarged, and the limb painful. On the eighteenth day the limb became very painful; the veins which had been tied appeared hard and impermeable; there was much tumefaction around the vessels which surround the articulation of the foot, and the patient complained of great pain.

"This first attempt was of a nature to render great care necessary in the treatment; however, at the end of six weeks, they ligated a large vein, situated above the external part of the articulation of the foot; the ligature was removed at once. Febrile symptoms soon appeared, with vomitings. Fourteen ounces of blood were taken. The vein of the arm undoubtedly commenced inflaming, for the limb became painful. There was retention of urine,—bladder evacuated by means of catheter. Retention again next day, with spontaneous evacuation in the evening.

"The operations had to all appearance brought on the obliteration of the tied vessels. Notwithstanding, it was thought proper to make two new ligatures, which were taken off immediately. This time the results were still more formidable; vomiting, streaked with blood, was first observed, a full quick pulse, and retention of urine; then the pulse became almost imperceptible; delirium, and painful vomiting; these alarming symptoms continued for three or four days. On the seventeenth day the general health of the patient was somewhat improved, and the incisions had entirely healed. During this time she had been bled three times, losing thirty-two ounces in all."

We do not know which to admire most, the courage, patience, or daring of the surgeon, who had so many dangerous symptoms to combat.

The treatment lasted about two months and a half; but it appears to have been very successful, for it is said that two years afterwards the patient walked nine miles, to see her surgeon, and that she did not experience the least inconvenience from her old affection.

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This happy result must be attributed to the facility with which inflammation was brought on, and because the disease was followed by the surgeon from point to point. But as the veinous system is not equally susceptible in all patients, this method would probably prove useless, because the constriction of the vein, however slightly prolonged, would seldom bring on the obliteration. Besides, it is necessity which has in some measure carried this mode of operation, which theory and knowledge of what takes place in the other methods of obliteration makes us regard as totally insufficient, and incapable of being generalized.

Method of M. Wise.—"This author recommends the temporary ligature; he has observed that the clot forms itself at the end of forty-two hours. He employs a slip-knot. He removes the ligature sixty-six hours after its application. It seems to me (adds Lisfranc) that this is sufficient time to produce phlebites; I think, to extract it, the cicatrice, if any exist, must be torn; I think they must rub the already irritated vein. Here are causes capable of bringing about the accident which should be avoided. This method, it appears to me, is bad."

Remarks.—The methods of temporary ligature are now forgotten; I shall not be long discussing them; they all have the fault of affecting the integument, since a previous incision is necessary in order to discover the vessel. The wound could, in reality, be healed by the first intention; but if, as in the case of M. Davat, the contracting bandage is left in place, either the adhesion will fail, or the wound will at length become the seat of abscess; for all hopes of the absorption of the ligature must be given up, whatever their nature may be. If, on the contrary, the ligature is taken off immediately after the compression, as did Freer, or even sixty-six hours later, as M. Wise recommends, we have good reason to fear that the blood will again find its way through the vein.

These different methods are, in reality, less dangerous than that of Delpech; but they inspire but little confidence. I think, therefore, that they should be given up.—Dr. Verneuil, *Professeur agrege de la Faculte ancien Prosecteur.—Philadelphia Medical and Surgical Journal.*

Insanity from Ulceration of the Os and Cervix Uteri. By H. E. Longshore, M. D.—Mrs. B., of a neighboring city, thirty years of age, the mother of five children, the youngest ten months old. For two months previous to her last confinement she complained of pressure on the brain; was gloomy and silent, and took but little interest in her family affairs. After

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her confinement these symptoms increased and evidences of a degree of insanity were apparent.

One day her husband returned home and found her, with four of her children, asleep from over-doses of laudanum, which she had administered for the purpose, as she subsequently declared, of "taking the children with her to a better world." By prompt medical aid they were all saved, except one promising boy, who lay in another room, and was not found until too late; he was asleep to wake no more.

To change her associations, and to improve her health, she was induced to travel, and visit her friends in this city. When first called to see her, I found her weak and emaciated. She complained of nausea, loss of appetite, constipation, a deep aching circumscribed pain in the left avarian region, and in the lumbo-sacral region, and a dull pain in the top of the head, which, to use her own language, felt "as if a mill-stone lay on it." The lacteal secretion was quite suspended, and a profuse muco-purulent discharge from the vagina.

I considered these symptoms as evidence of some disease in the uterus, or its appendages, and on examination, found the os and cavity of the cervix extensively ulcerated. The diseased surfaces were freely cauterized at successive periods, and alteratives, aperients, anodynes and tonics were administered, as indications demanded. The improvement of the symptoms kept pace with the progress of cicatrization. At the end of three months the cure was completed, all the distressing symptoms vanished, the lacteal secretion restored, and the mind had regained its integrity. Though comparatively weak, she felt able to return to her home.

I heard from her, from time to time, and in some months after she made a visit; her cheeks were rosy; she had gained thirty pounds in flesh, was healthy, joyous, and happy, and still nursing her babe.

My experience in this and in other cases of the same class, has led me to believe that much of the mental and nervous suffering of females may be ascribed to ulceration of this structure; and it might be obviated or remedied by timely and proper attention.

But the difficulty in many instances, heretofore, has been that the physician was unable to learn all the symptoms, and to form a correct diagnosis. Society has fostered a delicacy which has forbidden the revealment.

[*Philadelphia Med. and Surg. Jour.*

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Evil Effects of Shaving the Beard. By E. SANBORN, *of Andover.*—I am prompted, by remarks recently made by a learned professor of theology, on his conflicts with the razor, to ask if the habit of shaving is not both deleterious to the physical health, and deteriorating to the races which practise it? The professor thinks that by shaving daily for forty years he has wasted a year and a half of laboring time, and nearly fifty pounds of beard, to say nothing of the blood and tears he has shed, and the agony he has endured. It has, he says, been the the great misery and *waste-way* of his life, and he would give the world if he possessed it, as would thousands of his brethren, if custom would sanction the omission of shaving.

Now I have, within the past year, perhaps owing to my own long-beardedness, which, by-the-by, is indispensable, heard so many similar remarks, both from eminent ministers of the gospel and other citizens of most sterling sense, and witnessed personally so much evil from the habit, that I cannot forbear requesting the privilege, through your excellent Journal, of saying that, comparing the present with the past, there seems to me a fearful deterioration in the physical organization of our race, worthy of the most serious and immediate attention every true-hearted American, patriot and philanthropist. It cannot but be obvious to all who regard the future defences of our country, that large families of robust and healthy children are far less numerous now than they were in former days.—Scrofula, that truly direful scourge of pro-shaving England and America, invades, in some one or more of its many hideous forms, almost every domestic circle of our American population. The indescribable pangs of neuralgia, which were scarcely known to our ancestors, are now as familiar as household words in our families. Nearly as much is true of bronchial and catarrhal affections, erysipelas, heart-disease, premature defection of the senses, physical deformity and prostration; coughs, and consumptions which waste away the strength and beauty of our homes, and dry up the fountains of our joy. Another eminent professor, whose active love of humanity has familiarized him with the customs and conditions of many nations, says—"I have been much among the Abrahamic race who never violate the command—not to mar even the corners of their beards, and I never saw an instance of drunkenness or pauperism, nor of premature physical debility or hereditary disease, as they exist among pro-shaving nations. Who shall say that this chosen people, this most heavily bearded of all races, is not by their religious devotion to the laws of health, destined to stand upon the earth and fill it with unabridged, unadulterated manliless, when other nations of greater boasted

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light and knowledge shall, by their fool-hardy violations of nature, have consumed themselves and passed away?"

The aboriginal inhabitants of our soil and climate were once brave, powerful, and numberless almost as "the stars in the sky, the leaves on the trees, and the sands on the sea-shore." But they waged war unceasingly against nature. They resisted her kindly efforts to mantle their faces with manly beards, grew each generation more and more effeminate, became an easy prey to their enemies, and now, like the beard which they so obstinately uprooted from their faces, they are themselves uprooted from the face of the earth. The Chinese, too, have been "*shorn of their locks*" and their strength, till as a nation they have but little more than a nominal existence. I speak from the experience and close observation of more than twenty years of dental practice, in saying that I have not a doubt that to the loss of nutrition, and to the exposure and derangement of the animal functions caused by incessantly scraping off the beard, is to be attributed much of the alarming increase of premature defection in the dental organism, which tends directly to imperfect mastication, indigestion, dyspepsia, and "all the ills that flesh is heir to." It is now no uncommon thing for children ten or twelve years old to need extensive operations on their secondary teeth, nor for young men and women of twenty to require whole sets. Truly, with a vengeance have the fathers eaten their sour grapes. At this rate, how soon as a nation shall we be "*sans* eyes, *sans* teeth, *sans* everything?"

This increasing degeneracy is no new idea; but while one attributes it to a variable climate, another to unventilated houses, another to lead-poisoned water, and others to flour *too finely*, or to food too coldly, too hotly, or too hastily *bolted*, few only venture to speak boldly of the tons and tons of the physical stamina and manliness of pure Americanism which is daily sacrificed by the relentless razor to that despotic Delilah, Fashion. Pulmonary disease, bronchial inflammation, cough and night sweats, had so reduced my system more than a year ago, that eminent physicians in Boston and elsewhere assured me that my existence would soon be terminated. Resolved, however, if go I must, to go as whole and resistingly as possible, I discarded at once, and as I now joyfully believe *forever*, the use of my razor. The result is—a restoration to almost perfect health, and freedom from thirstiness and debility which seemed formerly to demand so much medication and artificial stimulation. That I have a heavy grizzly beard is most true, and that it is offensive to existing tastes it grieves me to say is quite as true. But that it is repulsive, excessively so, to the shallow-brained dupes and votaries of mere unsanctified cus-

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tom and conventionality, troubles me so little that I survive the caustic joke, the scornful smile, the withering frown, the cold shoulder and diminished patronage, assured that I am a thousand fold repaid not only in restoration to health, but in "a soul's calm sunshine and a heart-felt joy" which exists only in a consciousness of rectitude that can afford to be laughed at.

It is far from self-conceit which prompts these remarks, or urges me to say that the accumulation of facts which as a matter of course must have resulted from my long-bearded experience, will enable me to give comforting suggestions to such as are almost persuaded to follow the teachings of nature and true philosophy in this matter. The task is harder in later than in earlier life, before the beard is excited to unnatural growth. And as there is, as I most solemnly believe, not one well-founded argument why men of any age or condition should continue the habit of shaving, there can be none why boys should ever commence it. Nor would one of a thousand of them do so, if they only knew its evil consequences. It not only destroys the germs of their future physical health and manly beauty, but it wastes away the dews of their youth, their native simplicity, their truthfulness and confidence in the wisdom of their Creator. Neither the image of God nor any of his works remain sacred in their sight. For if, as they say, the "human face divine" may be improved by their boyish efforts, what of God's creating may not be? Nature's teachings and the dictates of conscience become less persuasive than human wisdom, and they verify the fact that man, though formed at first upright, will "seek out many inventions."

The habit of shaving is not of "origin divine" as thousands seem to think, but quite the reverse. The ancient patriarchs, the holy prophets, Christ and his disciples, and the earlier and probably purer christians, deemed it a violation of the laws of their nature. Alexander enforced it upon his army that they might thereby gain a bloodier conquest. The nobility of Spain adopted it through courtesy to their beardless prince. The mass were of course subjected to the humiliating process, but expressed their repugnance to the outrage in the well-known proverb:—"Since we have lost our beards, we have lost our souls"—that is, ourselves, our identity. We are rather soulless slaves, then the men our Maker made and designed us to be.

Will not the free born sons of America, whose pure patriotism scorns the dictation of foreign potentates, dare to be morally as well as politically free—free from all conventionalities which oppress common humanity, and weigh heavily on the mass of our population; and especially free from every influence which insidiously tends to vitiate and depress the true manliness of

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man, and womanizes those masculine and gigantic powers which are to be our country's defence against the jealous, hungry, couching nations about us? And will not their mothers, sisters, wives and daughters, second these efforts, and exercise their own good taste in creating and sustaining such purely American fashions and habits as will, to the end of time, render them and their progeny still more excellent in all the various relations of life?

[*Boston Med. and Surg. Journal.*

On the Pathology and Treatment of Acute Rheumatism. By O. C. Gibbs, M. D., of Perry, Ohio.—In the February number of the "Medical Examiner" for 1854, I published a few thoughts upon the treatment of acute rheumatism. The appearance, in this country, of Dr. Fuller's full and able work upon rheumatism, and some of the opinions therein maintained, and, so far as I have observed, critically approved by medical periodical journalists, have induced me again to introduce the subject for additional remark.

A disease so frequently met with, in all latitudes and in every condition of life, often protracting itself for many weeks, and, if not directly fatal in its incipient form, both directly and indirectly so in its cardiac and many other complications, certainly needs no apology when frequently introduced and made the subject of therapeutic comment.

Much has been said by able writers upon the pathology of this affection; but, up to the present time, little is known beyond the vagaries of conjecture. This diversity of pathological opinion has been more than equalled by contrariety of therapeutics; for in but few diseases has there been a greater discrepancy in the modes of treatment proposed and adopted by the most intelligent authors and observing practitioners.

A notice of a few of the more prominent pathological and therapeutic opinions may not be uninteresting in this connection. Dr. James Arthur Wilson, in a lengthy paper, published in the February number of the "London Lancet" for 1845, expresses his belief that rheumatism is essentially an idiopathic fever, and that the determination of inflammation to the joints, etc., is as much a conservative process as is the eruption in rubeola.

A few quotations will give a more faithful expression of his opinions. Thus, he says, "the disorder known as acute rheumatism is, in truth, a well-marked idiopathic fever, always tending, like other fevers of this kind, to limit itself by its own actions within a given period of time." * * * "As the

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scarlet fever localizes itself especially in the throat, the measles in the mucous lining membrane of the lungs, the epidemic typhus in the cæcum and lower ilium, and the erysipelas fever in the integuments of the head and face, so is the rheumatic fever determined, by special effects of inflammation, to the larger joints of the body and the surrounding articular structures. But the heat, redness, and swelling thus induced, are no more the cause of the constitutional disturbance in acute rheumatism, than the scarlet rash or the small-pox pustule of the fevers that bear their respective names." * * * * "It most resembles the exanthematous fevers; for, like them, it is distinguished by a series of rapid, continuous actions, violent as inflammation, yet harmless, for the most part, in their results. Of this eruptive character there is abundant illustration in the heat of surface, the profuse acid sweats, the erythema, and varied miliary rash, by which the rheumatic fever is specially distinguished. Its action is not more determined to the joints than to the skin." * * * * "The local rheumatic inflammation, like that of small-pox pustule, is exactly limited in space and time, and is protective of the part it occupies. Salutary in its purpose, it is succeeded by an action of repair, measured, rapid, and peculiar in itself." * * * * "The joint-fever of acute rheumatism is likewise a heart-fever." In reference to treatment, he says, "yet, in the approved treatment of rheumatic fever, though the character of its action be special and inflammatory, the principle of its cure is not antiphlogistic." * * * * "In the treatment of a disorder which is essentially one of action, the best indications are those which its own action affords; and thus, in the lavish sweats of rheumatic fever, we find our warrant for the use of remedies which are determined specially to the skin." * * * * "In absolute power over the fever of acute rheumatism, by the direct control of every symptom, the hot-air bath is superior to all remedial means hitherto employed."

In reference to the pathology, it is necessary to say only, that if the disease is essentially one of fever, and the arthritic complication is conservative, or, to use the author's language, "is protective in tendency and purpose, as furthering the great business excretion," then the fever should in all cases *precede* the local inflammation; the most *favorable* cases should be those accompanied with the *greatest* amount of protective local disease; the worst cases, should be those in which the local conservative process, as in measles, does not "come fairly out," and the cardiac localization should be alike salutary. Unfortunately for this theory, for this attempt to class rheumatism with the eruptive fevers, known facts militate against

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it. The local inflammation almost always *precedes* the fever, which, in intensity, bears a striking resemblance to the amount of local disease. In a word, the severer the arthritic complication, which is called "protectiva in tendency and salutary in purpose," the severer, usually, is the fever, and the less amenable to treatment. This fact alone is sufficient to gainsay the theory.

The plan of treatment by diaphoretics is by no means new, having for many years had occasional advocates. To the writer, the treatment seems about as consistent in rheumatism, as the same sweating plan which was for a long time practised in small-pox. If the diaphoresis, peculiar to rheumatism, is an indication for the exclusive employment of diaphoretic remedies in the treatment of that disease, then the same remedies should be employed, and should be superlatively efficacious, in the treatment of hectic; for the same indications are an equally *legitimate deduction* from the profuse nocturnal perspiration in that affection. It is very generally conceded, that the sweats peculiar to rheumatism by no means mitigate the local disease, or, appreciably so, the general symptoms; if this be so, it is certainly difficult to see how perspiration, artificially produced, should be more efficacious in a remedial point of view. I know, Dr. Wilson, and Dr. Fuller as well, attempt to refute this general opinion; but, at present, the weight of argument is against them.

Dr. Wilson's opinions have been noticed thus fully, because his therapeutic indications are the same as are deducible from the pathological opinions of most other writers upon this disease. Very many consider a deficiency in the cutaneous excretions to be the exciting cause, and the consequent retention and accumulation of morbid material in the blood, as the principal pathological element in this affection. If this be so, then the hot-air bath and diaphoretics of Dr. Wilson should be the only needed, and the most efficacious of all known remedies. The opinion first expressed by Dr. Prout, and advocated in the late work of Dr. Fuller, forms no exception to this; for, if lactic acid be the "*materies morbi*" in acute rheumatism, then the profuse acid-sweats point to the above-mentioned remedial agents as the sheet-anchor in this disease. But more upon this further on.

In the London Medico-Chirurgical Transactions for 1849, there is a paper from the pen of W. Basham, M. D., on the Pathology and Treatment of Acute Rheumatism. From several analyses of the blood taken from patients laboring under this disease, he finds the fibrine increased to more than double its normal amount; while the salts are deficient, by rather more than one-fifth of their weight in health. This increase

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of fibrine, accompanied with a deficiency of the saline ingredients in the blood, he looks upon as a therapeutic indication for the exclusive use of the nitrate of potash in the treatment of rheumatic affections. Admitting Dr. Basham's analyses to be correct, and the pathological conditions of the blood, which he discovers, universal in acute rheumatism; these conditions cannot be dignified with the title of *chief causes*, or principal pathological elements of that affection; being simply *ordinary phenomena* of the disease. An excess of fibrine is common to all inflammatory diseases, and a deficiency of saline ingredients in the blood is certainly not peculiar to rheumatic affections. (See Williams' Pathology, third American edition, p. 107 and 109.) This treatment by nitrate of potassa is by no means new. Dr. Brocklesby was among the first who proposed it, and it has since been largely used and recommended by Drs. Gendren, Solon, Bennet, and others.

The grounds upon which Dr. Basham recommends the nitrate of potash are worthy of a moment's notice. He claims *first*, that it remedies the deficiency of the saline ingredients in the blood, and *second*, that it diminishes the amount of fibrine, and prevents its deposition, by destroying its property of coagulating. I cannot conceive, and he does not explain, how the first can be accomplished by the introduction of a salt which is not a constituent of that fluid in its healthy state. (See Simon's Chemistry, vol. 1st, p. 232.) Dr. Karl Popp, infers, that the administration of nitre diminishes the amount of fibrine in the blood (See Ranking's Abstract, June, 1846); but that inference, I believe, is still wanting in proof. Dr. Blake, of St. Louis, has proven positively that it *does not* prevent the coagulation of the blood; but, on the contrary, when injected into the veins, coagulated it firmly. Of whatever therapeutic value the nitrate of potash may be found possessed, in acute rheumatism, Dr. Basham's theory of its action seems certainly untenable. That it exerts a remedial influence over the disease I am not disposed to deny; but that it is in any way superior to the *same influence* over *other diseases* of an inflammatory character, I have never seen reasons for admitting.

Persevering has been the effort to find the proximate cause of acute rheumatism. Dr. Fuller, in his late work, says upon this point, "it is probable, therefore, as the skin is the peculiar emunctory of lactic acid, that in it we have discovered the actual *materies morbi*." He believes the immediate agent, in developing the phenomena of rheumatism, to be "a morbid matter in the blood, generated in the system as the product of a peculiar form of mal-assimilation—of vicious metamorphic action. This poison it is which excites the fever and produces all the pains and local inflammations which are often found

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associated in an attack of rheumatism." Dr. Prout was perhaps the first who suggested this view of its pathology, since which it has not lacked for advocates both at home and abroad. Still, the opinion is as hypothetical as when first suggested. Though the favorite offspring of many a foster-parent, it has not yet the power to stand alone. With this view of the nature and essential cause of the disease, Dr. Fuller believes this acid *materies morbi* may be neutralized, "its irritative property probably diminished, and its elimination promoted, by a free exhibition of alkalies and neutral salts." The alkaline plan of treatment was recommended by Dr. Buckler, of Baltimore, in the *American Journal of Medical Sciences*, for 1842; by Drs. Edwards and Wright, in the *Medical Times*, for 1847; by Drs. Budd and Golding Bird, in the *London Lancet*, for 1851; and other physicians in this country and elsewhere, have administered and advocated the same remedies. Dr. Furnival, in the *London Lancet*, for 1844, recommends alkalies as almost specific in their action, not only in the arthritic inflammation of rheumatic disease, but in its cardiac complications also.

Lactic acid may be "the primary, proximate, or essential cause of the disease;" but wanting proof, as the opinion does, nothing would be lost, I apprehend, in considering the acid character of the cutaneous and renal excretions as one of the *ordinary phenomena* of this affection, rather than dignifying it with the title of essential character and proximate cause. That these excretions are symptomatic, instead of causative, gains support from the fact that they are by no means peculiar to inflammatory rheumatism. If lactic acid be the *materies morbi* of this affection, may not alkalies be given to such an extent as to effectually neutralize it, and thus cut short the local inflammations with the same speed and certainty with which quinine arrests, or rather prevents further paroxysms of the ague?

Alkaline remedies may be important curative agents in this affection, but I opine that it is not necessary that they act directly as antacids; at any rate, I question their specific action, as neutralizers of an acid *materies morbi*.

Until some new light shall be thrown upon the nature of acute rheumatism, I trust nothing will be lost to sound pathology, or a wise and safe therapeutics, in considering the disease one essentially of inflammation; of which the fever and acid sweats are but the ordinary phenomena and sequel, and in the production of which, cold is the chief exciting cause. I know, Dr. Fuller denies to cold any such agency; but, notwithstanding this denial, I opine the medical world will still consider cold the chief external cause of rheumatism, and the

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retention of normal excretions in the blood an ordinary phenomenon, or at most a secondary cause and sequence of the primary. If this opinion, in reference to the nature and cause of rheumatism, be correct, then it would seem that the ordinary antiphlogistic remedies conjoined with those of a kind calculated to act decidedly upon the excretory organs, favoring thus the elimination from the blood of retained normal excretions, would be those best calculated to subdue the disease. Blood-letting, purgatives, and mercurials, have long enjoyed the reputation of being second to no other remedies in the treatment of inflammatory diseases. And, if to the judicious use of these, diuretics, diaphoretics, and, in certain cases, tonics, be added, it would seem as though all the indications deducible from the nature of the difficulty and the symptoms, were being fulfilled. The treatment adopted by Dr. Chambers, and communicated by Dr. Hope, in its minutiæ seems so perfectly adapted to meet the indications in this disease, as to be worthy of especial mention. The plan is doubtless familiar to every reader, but its importance will justify a repetition.—It consists in a full venesection in the robust (to be omitted in the feeble), to be followed by eight or ten grains of calomel and a grain and a half of opium, every night, succeeded every morning by a strong black dose, sufficient to secure four or five stools. With this treatment is combined, thrice a day, a saline draught, containing from fifteen to twenty minims of the wine of colchicum, and five grains of Dover's powder. The calomel to be omitted when the swelling and pain greatly abate, or the gums become in the least tender. For several years, I have adopted this plan of treatment, and when early commenced with have never seen endo or peri-cardiac complications or known a case to protract more than ten days. These fortunate results may have been accidental; but I have tried other plans,—have used the nitrate of potash as recommended by Dr. Basham, and the alkaline carbonates now so highly spoken of by Dr. Fuller, and the results have by no means been as favorable as those given in the statement above. I have used the alkalies for four weeks in a sub-acute case of rheumatism, without benefit, and then put an end to it in a week by the treatment detailed.

Dr. Fuller affirms that the use of mercurials in rheumatism, *invites* cardiac inflammation, and some of his reviewers subscribe to his statement. I am disposed to question the correctness of this statement. The period at which cardiac complications supervene, according to Dr. Budd, varies from the eighth to the twenty-seventh day. Now, in view of this fact, it would seem reasonable to suppose, that if the disease could be almost invariably put an end to *before* the eighth to tenth

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day, by judicious medication, that such medication would very *materially lessen* cardiac complications. Again, it is admitted that, when endo or peri-cardiac inflammation supervenes, calomel is the sheet-anchor, and should be given to the extent of producing ptyalism, simultaneous with the production of which the local and general symptoms begin at once to amend. Now, if the existence of rheumatic carditis is incompatible with the mercurial impression, then it is certainly reasonable to suppose that the early induction of this impression, or any considerable approximation towards it, *before the supervention* of cardiac inflammation, would *diminish* rather than increase the frequency of such rheumatic complications.

It may be objected that the treatment proposed by Dr. Chambers, and here recommended, savors too much of empirical routinism. In reply, it may be said, it is not more routinal than is the treatment for most other diseases. In pneumonia, for instance, blood-letting, antimonials, mercurials, are the remedies; in comparison with which all others are inefficient and unsatisfactory. In regular practice, hardly a case occurs of the acute disease, but these remedies, in the whole or in part, are put in full requisition. A sameness of disease would seem to require a sameness of remedies, varied only to meet peculiarities of constitution and severity of attack. Remedies cannot be said to be empirical, unless given irrespective of the indications deducible from the symptoms or pathology of the affection. In inflammatory rheumatism, no known remedies seem better calculated to subdue the inflammation and fever than blood-letting, mercurials, and purgatives. And to excite the liver, bowels, kidneys, and skin, to assist in the process of elimination, mercurials, purgatives, colchicum, nitre, and opium, are the means most worthy of confidence. In asthenic cases, blood-letting is, of course, injudicious; and mercurials, and purgatives, should be administered less energetically, and conjointly with quinine or some other tonic. It is in such cases, I apprehend, that the beneficial effects of alkalies are most conspicuous; acting, perhaps, not as antacids, but similar to and as a mild substitute for mercurials.

In the study and practice of medicine, there is a constant longing for medicines new and more efficacious. In rheumatism, I apprehend the list is already too ample; that more, perhaps, may be gained by a judicious combination and use of those already known and long and successfully administered.

[*New York American Medical Monthly.*

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"The Change of Life" in Women; *with Remarks on the Period, usually called 'Critical.'* By Joseph Parrish, M. D.

NUMBER V.

The touch—Its value, compared with the value of the Speculum—Peculiarities of the first "Change."—The cause of Menstruations.—Puberic Age.

The last paragraph of our last essay upon this subject, declared the speculum practice, *per se*, to be unobjectionable, but, the speculum *specialty* as adopted by many, an outrage. It is but fair, as we have ventured this rather wholesale assertion, that we should present our views of what may be substituted for this system of *inspection*. This we shall do before we proceed to notice some of the diseases of the periods of "change;" for we are aware that the speculum has many strong advocates, and we would not be arrayed against them, or their *system* (for such we must call it), without offering a few suggestions on the touch. The eye, it is true, presents its claim to superiority over the finger, however delicate and sensitive may be the latter; but we claim for the touch more perhaps, than our *vision*-ary friends are disposed to grant us. And as we press our claim, we ask an honest hearing.

The sense of touch has been bestowed upon us, that by it, we may discover the palpable qualities of bodies, their size, consistence, &c. We cannot tell the consistence of a body without touching it. If we would know of its sensitiveness, we must touch it. The mind may quail before a glance of fire from the eye,—the soul, conscious of guilt, may tremble under the gaze of accusing innocence; but the tangible form of an organized, material structure, needs to be handled, that it may be measured, weighed, and accurately judged of. We have to do now with a womb, supposed to be diseased. It is certain, says the prescriber, something is the matter. The woman is in bad health, and as the stomach, and liver, and kidneys, and intestines, all seem to be well, her womb must be out of sorts, and hence it must be looked at. Why so? The liver was once diseased; there was a violent, active, inflammation, and did you look at the organ? No. Did you feel it? Yes. The stomach, not long ago, was the seat of an acute gastritis. Did you look at that? No. Did you feel it? Yes. The intestines were almost eaten through with ulceration, and you knew the exact spot where the process was going on. Did you see the spot? No. Did you feel it? Yes. The uterus is now supposed to be in an abnormal condition. It is thought to be so, because there is a "change of life" with the patient.

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What is to be done? Is it necessary, right away to procure the speculum, and proceed to a visual examination? Is it even necessary to prescribe the touch? In the majority of cases, not. You did not look at the stomach, and liver, and intestines, because you could not. The integuments that cover them were not made transparent, and light would not deviate from the laws which govern it, and hence you did not see. You pressed with your finger through those integuments, and measured the boundaries of the disease as well as you could; you heard the responses of the patient, and recognized the points of pain, and could judge of their particular locality. Now, you want to *see* the uterus, though it may be very readily felt, because somebody has invented an instrument through which you may look. You have not been so indelicate as to touch; you have not with your finger measured the size of the womb—nor judged of its sensitiveness; you do not know whether it is hard or soft, and yet you must throw candle-light upon it, to answer these questions, which an intelligent touch alone can answer.

You know, or think you do, what can be done with the speculum. We know, or think we do, what can be done without it. Let us compare. We may pass the finger directly in contact with the *os uteri*, without disturbing its position, and judge immediately of its *locality*. If it is too high, or too low, too much anteriorly or posteriorly, we know it. What can be done more with a speculum, as to position? Indeed, the rotation of the instrument and its proper adjustment, may disturb the position of the organ in such manner, as materially to interfere with forming a correct diagnosis. We may touch the anterior and posterior lips,—press, and ask the patient if she suffers pain, and thus judge of its *sensitiveness*. Could the eye do more? We may feel if it is *soft* or *hard*, *ulcerated* or *congested*—will the speculum answer more correctly? We want to know the *temperature* of the organ, and surrounding parts. The quality in this respect, is imparted to the finger. Is it to the eye? Immediately connected with temperature, is the question of *moisture*. How much secretion is there, and what its kind? Can the eye discern better than its more humble adjunct?

The *color* and *consistency* of the secretion, it is important to recognize. May not this be brought to view upon the napkin, by the finger, and judged of more accurately than at the apex of the vagina, through a tube, and by an artificial light? Then, with reference to the *weight* of the organ, which is not an unimportant item in the diagnostic to be sought. Will not the sentient fibrils tell as true a story as the *nervus opticus?* Who can doubt it? But we will not be so unreasenable as to assert

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that the speculum is a useless instrument. We believe to the contrary. While by the touch we may appreciate structural changes in the organ—measure its bulk, and judge of its consistency, the speculum may be used to observe the limits of excoriation, or whatever form of lesion may be present. At the same time, without it, we may judge with tolerable accuracy, from analogous appearances in other parts of the body. An ulcer upon the cervix uteri, will not perhaps differ much from an ulcer upon the leg, and the surrounding tissues in either case, may be marked by similar appearances. The treatment will be founded upon the same principles, though there may be a difference in the mode of its application. We cannot therefore admit that there is a very great variety of cases, where this instrument, valuable as it may be sometimes, is really needful. Indeed, we readily conceive of some, where the use of it would be manifestly improper. They are these—In very young persons, the hymen must be lacerated, (as has often been done by *skilful* operators), and the injury resulting from such introduction, is, we venture to believe, and declare, more serious in the majority of cases, than the original complaint, if really any may have existed, for the discovery of which the speculum was used. In very old persons, or even in those of matronly age, who often think themselves the victims of uterine disorder after the cessation of the menses, the vagina is contracted, from a natural shrinking of the muscles. And from cicatrices of old injuries, or diseases, there may be tough fibrous bands stretched across its calibre, so as materially to interfere with the introduction of the instrument. Again, in cases of irritable uterus, or irritable vagina, or severe inflammation of the parts, the diseased action, is very liable to be aggravated, whether it be a primary irritation, or a well developed phlogosis, by the distension, and suffering consequent upon its use. We therefore denounce the premiere resort to the speculum as unphilosophical, unnecessary, and dangerous. At the same time we admit that as a dernier means, it may be used in many cases. The rule should be this. Cultivate the touch,—teach the finger to its utmost power, and remember that in doing this, the mind acts more acutely, and as it acts, becomes stronger, and more accurate in judgment. When the finger fails to detect the difficulty, use the speculum—use it too, of necessity, where local treatment is demanded; but use it not, where it may not be imperatively necessary.

Now we ask the intelligent mind of an enlightened profession, if this view of the case is not a correct one. We ask the moral sense of a virtuous profession, if the sanctity of woman's nature should be violated by needless exposure? We say

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needless, because we believe the speculum fashion may often drive its votaries to extravagances, which, if they do not now, they may soon regret. If the opinion here offered, should be proved by the experience of others, to be well founded, and the speculum specialty loose its hold upon the professional favor of many, the worst result that we can anticipate, would be the preservation of a stricter morality, even at the expense of some scientific attainment.

Another consideration. It may be that symptoms of constitutional disturbance, in cases of uterine disorder, are too much overlooked, by a constant reference of the mind to the idea of locality in disease, and by an application of remedies alone to the organ itself. This is natural, and to a certain degree, rational. But a more extended investigation, which observes critically the whole constitution of the patient, as it displays its biotic force in the great efferent, and afferent-circle, whether of nerves, or of circulating tubes, embracing the organic life, from the capillary springs, to the great reservoir, which drives the wheels of existence, is more likely to result in the good of the patient, and the honor of science.

May we not then with fairness, invite the admirers of the speculum specialty to study the constitutions of their patients, and to scatter a little of their wisdom to their finger ends, and perhaps, in the careful manipulations which they may make, healing virtue may be imparted to the subjects of their counsel, while female modesty shall be saved a shock, the tendency of which is to impair, if not to paralyze its strength.

It would have been inconsistent with our object in communicating the series of essays, of which this is the fifth, to overlook the subject we are at present considering. And though it may seem irrelevant to some, we trust the views that are herein announced, may meet with a candid criticism, by the honest minds of our profession; and if they should be proved to be unsound, no one will be more prompt to renounce them, than the writer. Having devoted this much space to the speculum, and the touch, we may now go on to consider, in order, some of the peculiarities of the various changes in female life. We shall consider the first change—that which occurs in girlhood. Reference has already been made to it, in its natural advent. It becomes us now, to point out some of the abnormal symptoms, that accompany its appearance, as well as to inquire into its uses, its elements, &c. This is necessary to a proper appreciation of the entire subject. Woman herself should know it. She has as much right to do so, as to learn about the gastric juice of her stomach, or the bile that is secreted in her liver.

In number two of this series, we spoke of the time of the

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menstrual appearance, of its average quantity, of the coincident growth of the entire organism, as well as of the particular organs concerned in its development. With the general idea already established in the mind, that the uterus is the source of the flow, we may now present the acknowledged theory of its cause, and proceed in course to other subjects as they may present themselves. To appreciate this properly, we must recognize a force—a *vis vitale*—as we have elsewhere called it, acting with an energetic impulse, during every moment of existence, not only to regulate the growth of the body, but to animate it, and give it the ability to grow. As we have already shown, this force exists in all living creatures. We have presented it in the seed, the germ, the ovule, in speaking of the exhibition of life power, in the development of the special organs connected with reproduction. We must introduce it again here, for the sake of applying it. Menstruation, when it occurs, is the first indication that there is the ovule, or rudiment, existing in the individual, that will enable her to become a mother.

Dividing the great life force, into the several departments connected with life function, we have in the intance before us, the reproductive force, of which menstruation is the sign. In its periodicity it resembles all living things. What is there in nature that is not periodical? What that does not change? Menstruation then, proves the existence of an ovule—the ovule contains the germinating principle, and the germinating principle, when it becomes active, under circumstances favorable for development, produces—and produces, from time to time, as the tree yields its fruit, or the flower its bloom, and fragrance, when under the control of influences designed to evolve its latent powers.

The human female exhibits this force monthly. The ovary is the instrument through which it is exhibited. It is as we have already said, part of the life force; that part which develops itself in the generative system, and is hence called the generative force. It begins in the ovary, because the ovary is the beginning of this particular system. Without it, there could be no reproduction. Imagine then the ovary—an ovoid body containing a multitude of exceedingly minute vesicles, each one distinct in itself, but congregated *en masse*. Imagine each vesicle endowed inherently with the power of projecting its contained ovule, and this power under the dominion of the law of periodicity, which is seen in all animated nature. As the projectile force is being expended at the appointed time, all the tissues concerned in the formation of the genital system sympathize with the effort. The nerves are more sensitive; the blood vessels, already exceedingly abundant and turgid,

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are aroused to greater activity, and in relieving themselves of temporary engorgement, exhibit the phenomenon of menstruation. This description is sufficiently minute to be understood by every intelligent reader, and to convey a truthful idea of the fact. It is to be understood then, that the menstrual flow is blood. What kind of blood it is, whether arterial, or venous, or a mixture of both, is a question that the wise dispute about. Some deny its being blood, and call it a peculiar secretion, to be found nowhere else. Perhaps it may be. It matters not to us in our present inquiry. Women call it blood, because it looks like it, and it may suffice to consider it as such. There is high authority in favor of both sides of the question.

We are now, however, at the age of puberty. We have described, in a former essay, the changes in development, both mental and physical, occurring at this "critical period." If those changes do not occur, something must be wrong. It is just as unnatural for the girl not to *change* into womanhood, as it is for the woman not to pass the second *crisis*, and become the matron of maturer years. The latter is dependent upon the former. Suppose there should be an interruption to the changes of puberic age, what would be its most probable appearance? Almost every mother can tell. She does not see her daughter of thirteen, more or less, running up like a wild stem of the forest, tall, thin, and tender, without anxiety. She wants to see her grow laterally—spread outwards, as well as upwards. And when she sees her thus growing, slender and pale, she fears that there is some irregularity of sexual development. Perhaps the demand made by the life force upon the blood, for osseus, muscular, nerve, and membrane tissue, has been so great as to deprive the reproductive force of its share of supply; and hence, with an increase in one department, there has been a corresponding subtraction from another. Reverse this picture, and the scene is reversed. How shall it be regulated? This is a simple question, which we shall attempt to answer in our next essay.

NUMBER VI.

How long is the Puberic Period? Emansio Mensium, its Hygienic and Moral Treatment. False views of Medication. True Therapeutics.

Before answering the question at the close of our last essay, we wish to present a few suggestions on the puberic age. The civil law fixes the age of puberty in females at twelve years; and while it may be well to erect a legal standard, it will not be safe to adopt the same rule in viewing the subject

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in the light of science. The menses may appear at twelve years, and often do, and if the report of carefully prepared statistics, was to make it the average period, still it is important to appreciate the fact, that when the womb menstruates for the first time, though it may be capable of conception, its powers in this regard, ought not to be employed. The change coincident with this period, already described, though sudden in its appearance, is not a change of a day, but of years. The mind and the body, take a long time to complete their development, and if we should be allowed to limit the puberic age, we should establish its boundaries, between the time when the menstrual effort first commences, and the individual assumes the full size of womanhood, and the judgment and will, with all the faculties of the mind, are being fairly manifested; in other words, till she is marriageable; for a woman is not marriageable, simply because her womb exhibits in her monthly appearance, the procreative power. She is a moral and social being, and is not capable of assuming such a sacred relation till her moral and social properties, and habits, are in good culture, and well grown. When she menstruates, she exhibits merely the evidence of her generative force; but she must afford testimony of that force being in its full, and regular development. The uterine structures must perform their first duties well, before they can be entrusted with the more important office of conceiving, and bearing a living being. Years must be spent in this discipline, while the mental and moral powers are being cultivated, to adorn domestic life; that as the physical, forms and matures, the intellectual, may be prepared to educate and magnify the immortal part. She may be physically a woman, at thirteen or fourteen, but she is not socially a woman, and hence is not marriageable, till, in, manner and mind she becomes what none but a woman can be. The puberic age then, according to this estimate, covers several years of life;—the most interesting period of existence; and it is when irregularity is manifested, that the health suffers. Now for the question—How shall the organism be regulated?

In our last essay, that species of irregularity that is marked by a non-appearance of the menstrual flow, was referred to. The osseous, nervous, and other deposits, were supposed to be furnished at the expense of the blood, and particularly of that portion of it, required by the generative function. At the puberic age, when the uterus is suddenly aroused to action, the whole nervous system becomes excitable, and its powers are loaned in aid of the efforts at menstruation. This condition is known by the term, *Emansio Mensium*,—signifying that the menses are "stayed." Such accident may be the result

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of congenital deformity or monstrosity; some part of the genitalia may be wanting, or not sufficiently developed. These cases we do not propose now to consider: but only such as occur, with a full development of the generative organs. In such, there is defective growth, not of the organic structure, but defective power in the nervous system, or impure blood finding its way through enfeebled vessels. Contemplate a young lady in this condition. The ovaries, and uterus, and all the suite of genitalia are there; the ovaric arteries, with those that supply the sciatic, and hypogastric regions, and the nerves of the same names and places, are all active, and tense, with the excitement incident to the period: but the flow does not come. The nerves and vessels stimulated unduly, feel the re-action consequent upon unsuccessful, though protracted labor; and the system elsewhere, responds with painful monitions to the generative effort. The defect is in the want of supply, and may be said to be dependent in most cases, upon improper, mental and physical training. When no congenital deformity exists, the rich air of the atmosphere, given to oxygenate the blood, has perhaps been excluded from the lungs—the physical exercise that is needed to make the muscles grow—the cheerful and wholesome delights of true domestic life, have been neglected, and the nervous system strained by artificial enjoyments, which, while they have consumed a taste for the real, and good, have substituted a morbid fancy for things false, and unsatisfying, and the whole economy has become the victim of indulgence, while the parent who should have been the regulator, is the sad mourner over the broken vessel, that it was her delight to adorn with the trappings and imagery, of a defective social system.

The family physician is consulted, and he finds perhaps a sallow complexion, irregular dejections from the bowels, loss of appetite, general lassitude, &c., with pains in the back, and a variety of symptoms, indicative of general disorder. If he be an *unwise* physician, he will probably at first, attribute this state of things to the non-appearance of the menses, and medicate with some of the variety of remedies known as emmenagogues. It is natural for him, however, to think that he must first prepare the alimentary organs for their proper action, and he judges that the biliary secretion must be altered by calomel; the renal product, increased by diuretics; the action of the bowels stimulated by gentle cathartics; and the tone of the stomach improved by tonics, while the dry and rough surface must be made moist and smooth, by an occassional sweating. The result of all this will be the taxation of the Doctor's power and skill, in the cure of symptoms, aggravated and complicated by his own prescriptions, and of the patient's

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vital forces in the resistance of oppressive treatment on the one hand, and a debilitated organism, on the other. If the physician be a *wise* one, he will judge that the non-appearance of the menses, instead of being the cause, is the consequence of the constitutional debility. Instead of the alterative treatment to *prepare* the system, and then the emmenagogue treatment to produce the menses, he will adopt a different plan. His meditations and conclusions will be somewhat as follow: My patient is pale and thin; her pulse is feeble, and easily excited; her skin is dry and chlorotic; her appetite various, and her bowels irregular. Her *morale* is defective; the temper is irritable; the natural energy of her early youth, has given place to habits of indulgence and ease; not of body only, but the mental and moral faculties have been allowed to run in an unhealthy channel. Why all this? She is pale, because her blood is pale; and the red corpuscles are deficient, because the pure air has not been breathed into her lungs, for she has thought herself too delicate to go out and inhale it. Her blood is thin, because her food has been defective; she has been too dainty to eat blood material. Her pulse is feeble, because her heart is; and her heart is so, because the blood is not strong enough to make *it* strong. It is easily excited, because her circulation is weak; for if you tax a feeble organ, or a community of organs beyond their strength, excitability is their answer of resistance. Her skin is dry, and lurid—her bowels, and appetite varied, for the same reason. Her temper is irritable, because she has given up to be delicate, and tender, and useless; and her brain partakes of the same morbific influence. She does not menstruate, because she neither has the material to supply, nor the power to produce, and yet all the productive machinery exists.

I will institute a thorough reformation in her mode of life, and let the materia medica alone, at least for the present. These shall be my therapeutics. Air, exercise, bathing, early rising, and early lying down, plain nutritious food, cheerful, and wholesome employment. Because she is pale and thin, I will give her fresh air, sunshine and blood-making food; for these contain the elements of health and vigor. Because she is irritable and self indulgent, I will send her forth to the study of nature, upon her fields, in her gardens, and under the shade of her forests; for I know that kind nature spreads out her beauties to attract and delight the eye; she invites to exercise, to develop the muscles; and she opens a store-house of wonders, to employ and energize the mind. Then for the defective *morale* of my patient, I will make her a messenger of Christian charities to the poor, and as she distributes them, her own heart will enlarge, and almost unconsciously to herself

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she will lose her taste for the follies and forgeries of life, as it is lived in the circles of fashion and ease, and find herself a woman, disciplined, and matured, in body and mind, for the beginning of life's battle.

How much better this, than calomel to cure the liver, and aloes to purge the bowels, and tansey to force the womb! In the one case, you develop the being, and perfect all the secretions by obedience to a natural law with which science agrees; in the other, you produce effects, over which both nature and science, weep tears of shame, and bitter reproach.

Though it may take months, and even years to accomplish this work, it is, nevertheless, to be done before the patient can be what she ought to be. The time that it takes, is the period of puberic age. Infancy has its term of years, and its crises. Childhood has its limits, and its peculiar diseases, and necessities. Puberty, has likewise, its probationary, or its forming stage, and out of this, it grows progressively, till the dawn of womanhood breaks upon its decline, and lights the way to sterner life. Hence, we esteem it a false doctrine that limits the puberic age, to a positive period. It would be safer, as already intimated, to fix its term within certain boundaries—as between the beginning of menstruation, and an age at which the individual may be considered marriageable.

According to this theory, then, several years are embraced within the term of puberty, and it may have assigned to it its proper divisions and variations. Mothers are frequently alarmed at the appearance of the flux at twelve years; and are disposed to attribute it to an unhealthy precocity in their children. So it may be; but oftener it is not. Here is the rule by which to determine. If the general system consents, if the constitution of the *infant u oman* is unimpaired by the appearance, it is not precocity. If the muscles have been so trained, and the blood so supplied, and the lungs so active, as to induce a rapid growth in the general system, and the uterine organs catch the stimuli, which are spreading out the body, and invigorating the entire creature, then they are not precocious in offering the mensual supply, because they are only responding to the native functional power which has roused up the whole being to sudden growth, and completeness. If on the other hand, with the monthly show at so early an age, there should be a decline of general health; if the muscles should shrink, the blood is slowly made, and the lungs fail to purify it, then the appearance would constitute an alarming precocity. In such cases, because the womb may waste much of the common supply, it should be kept in perfect repose by position, and by efforts to repress excited local action, while the flagging and indolent members of the body, should be aroused to increased

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functional activity, that a harmony and unity of purpose may be enforced and sustained.

So there may be on the other hand *tardy* menstruation. The menses may not appear at their wonted time, and the general development, progress without the marks of disorder. In such cases, there seems no need for interference, while the general health continues unimpaired. The flow is retained, perhaps on account of a little tardiness in the growth of the uterine organs, or of inactivity of function. In either case, the indications for treatment, would be manifested by some general disorder, or local disturbance. Without these there is but little if any danger.

Let us sum up then our ideas upon this subject, as follows: The term of puberty may be characterized by precocious menstruation, or an early appearance without precocity; by tardy menstruation without unnatural symptoms, or by failure of the menses, with the symptoms of emansio mensium. In all, the uterine organs are subsidiary to the rest. Their apparent diseases do not exist, unless there is deficiency in other parts, and they are relieved, as the general system approaches a healthy standard.

Eight Cases of Simple Intermittent, and six of Remittent Fever, successfully treated by the exhibition of partially denarcotized Opium. By W. S. Sinn, M. D., of Chili, Hancock county, Illinois.

By some, opium is highly extolled in periodical fevers for meliorating the cold stage; others have thought it operated most beneficially in the interim or the remission, and a few solitary cases have been trusted to that alone during the whole period of the disease. Perhaps there is no disease that is as amenable to treatment, and its management so clearly pointed out, as that of paludal fever, that has been the subject of such various and widely diversified treatment. Every one knows that quinine is certainly and suddenly destructive to its progress, but something cheaper and newer is the ambition that inspires almost every one that is often called to treat it; for in districts where it prevails extensively, a small fortune in a short time is requisite to cover the expense of the prodigal dispenser of that drug.

The fact that led my mind to the foregoing treatment more particularly was, that when opium was given in combination with the cinchonic salts, that a less quantity of the latter was sufficient to defeat analogous cases in a shorter length of time,

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and in a manner, I do not say *better*, but more satisfactory to myself and patients.

The manner in which I proceeded in the treatment of the afore-mentioned cases, was by cleaning the bowels with six grains of calomel, twenty to thirty grains of rhubarb, succeeding their administration in three doses two hours apart, with a small tablespoonful of castor oil, and beginning as soon as the bowels were well freed of their superabundance of fecal matter, if no gastric distress was present, with two grains of ipecac. and from three to eight grains of partially denarcotized opium every six hours, no matter at what stage of the disease. If there was irritation in the primæ viæ, the ipecac. was withheld and the opium given solitary.

In every case sleep soon overcame the patient, the pains in the head and back as well as limbs were soon dissipated, copious diaphoresis was established, the circulation perfectly equalized, and in no case did a single chill occur after the medicine had been used twelve hours in the intermittent, and in the remittent by the third day in the longest instance, the disease had yielded and convalescence was safely pronounced. The vertigo, tinnitus aurium, produced by the quinine frequently, is entirely avoided, and the patient enjoys a semi-somnolent state during the time of taking medicine, and at the end of twenty-four or thirty hours slowly emerges from his torpid state, his appetite slowly returns, and so far there has been no case that has had a relapse; and in fact the patient does not appreciate his illness, for he has suffered none.

These cases were all in which I tried the opiate treatment, and these were selected from their simplicity, for they were such cases as one feels safe in persevering in experimentation.

From the treatment, I should have little fears in trying it in cases of gravity; but I would recommend any one to try it in milder cases, before trying it in those of a more dangerous form. I tried merely to save quinine, and I intend to still use it, as long as I am pleased with it, in such cases as the foregoing.—*Nashville Journ. of Med. and Surg.*

Asylum for Inebriates.—No class so well understands the advantages of, and necessity for, such an institution, as physicians. By their advice, legislatures have frequently been solicited to found them; and the whole profession will be glad to see any thing which seems to indicate that there is some earnestness in the effort now making to establish one. We, therefore, give without hesitation or contraction, the report of the directors, and their appeal to the public:—

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We, the undersigned, appointed by the Legislature of the State of New York to organize an institution to be known as "The United States Inebriate Asylum, and to act as Commissioners to receive subscriptions to the capital stock of said Asylum," do herewith submit to the public the following statement:

The object of this institution is to provide an asylum for the poor and destitute inebriate, where his physical and moral condition will be alike the care of the physician and the philanthropist, and where his labor may be rendered productive and of service to his family. With the asylum there will be connected work-shops, in which each patient, as soon as his condition will permit, will be regularly employed—thus making the asylum a self-supporting institution. It will be seen that the community will thus be relieved of the burden of maintaining inebriates in alms-houses and prisons; who will be separated from the society of those incarcerated for public crimes, and placed where their inebriety will be treated as a *disease*, and where no efforts will be wanting to produce in them a thorough reformation; and where an income from their labor will be secured to their families, who otherwise would be left to penury and suffering. To carry out successfully the great aim of the institution, $50,000 must be raised; this being the amount of capital stock required by the charter. This amount, which can be increased when necessary, is divided into shares of $10 each. Any person wishing to subscribe to the capital stock, can send his name, with the amouut he will take, to any one of the directors.

We think it judicious to lease a building or buildings (until suitable edifices can be erected) for the purpose of entering at once, or as soon as practicable, upon the work for which the charter was granted. In accordance with a provision in the act of incorporation, there will be a report on the third Wednesday of January in each year, of the proceedings, expenditures, income, and condition of the Asylum, verified by the affidavits of the President and Treasurer, which report must be filed in the office of the Secretary of State.

In regard to the necessity of an institution of this character, we cite no less authority than Dr. Benjamin Rush:

"To the account of physical remedies," he says, "I add one more, viz: The establishment of a hospital in every city and town in the United States for the exclusive purpose of hard drinkers. They are as much the objects of public humanity and charity as mad people. They are indeed more hurtful to society than most of the deranged patients of a common hospital would be if they were set at liberty."

We are happy in giving assurance that this enterprise meets

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with the approbation and encouragement of many of the most intelligent and philanthropic members of the community. The directors put forth this brief statement of their object and plan of operations, with the expectation of meeting a quick and cordial response from the benevolent of this and other sections of the country. The call for sympathy and material aid in laying a permanent basis of an institution that promises much for the recovery and salvation of a large number of the human brotherhood, we are confident will not be unheeded.

This institution is not designed to conflict with any other method for recovering the inebriate. There is nothing, we believe, similar to it, in this or in any other country. Thousands will look to it for help, and help they should and must have. That which was worth creating is worth preserving. The benevolent Father puts it in our power to save those who are ready to perish. To rescue a follow-being from physical and spiritual thraldom, is worthy of the exercise of the highest talent and of the purest love. To redeem from ruin is greater than to create. To turn one from vice to purity, from darkness to light, from death to life, to make him the possessor of a free, enlarged, and beautiful existence, is a divine mission. Everywhere goes up the wail of wrecked humanity, of prostrate and suffering brothers. From every side comes the cry for help. They are the true workers who respond to this cry. They are enriched in giving, and blessed in blessing.

Fellow-citizens, fathers, brothers, and Sisters! Give us your aid in this branch of beneficence; and the blessing of multitudes will be your reward.

[The above is from the American Medical Monthly, and is signed by the Hon. Washington Hunt and sixteen others. We are heartily rejoiced to see that the attention of philanthropists is turned to this subject, for we have long felt the necessity of such establishments. We would like to see a prohibitory law to suppress intemperance, and a good asylum for inebriates in every State in the Union.]

Good Effects of Belladonna, in a Case of Spermatorrhœa.—Translated from Rev. de Thér. By M. Morton Dowler, M. D.

A young man, of the purest morals, and of entire continence, came to consult M. Lepri, in consequence of nocturnal pollutions, which, re-appearing every night, and even many times in a single night, began to exhaust his strength, and to effect his moral and intellectual faculties. These pollutions

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had existed for some weeks, and had not been relieved by any medicine, nor by any of the hygienic means applied, such as reposing on a hard bed, awakening in the night, and cold affusion, &c. Two years previously, this young man had an attack of miliary fever, which had left, as one of its effects, nocturnal incontinence of urine.

Some months had passed, in which the patient had been sometimes better, and sometimes worse, when, all at once, this vexatious infirmity disappeared.

After having applied a blister to each thigh, advised a tonic and corroborant treatment, and, also, treated the patient with camphor combined with laudanum, alum, &c., without the least success, M. Lapri came to the conclusion that the spermatorrhea, in this case, might have some connection with the previous incontinence of urine; and recalling to mind the good effects of belladonna, in the latter affection, he prescribed this remedy for the patient in the evening, on retiring to bed, and in the morning on rising. At the end of a few days, every trace of the malady disappeared.—*N. O. Med. Jour.*

On the Efficacy of Ice used in connection with Compression, in Reducing Strangulated Hernia, and in combatting consecutive Peritonitis. Translated from Rev. de Thér. By M. Morton Dowler, M. D.

Mr. Baudens read a summary of a memoir bearing the above title. The treatment that we adopt, says he, with so much success in cases of traumatic lesions— the application of ice, with or without the addition of common salt—we have extended to the treatment of strangulated hernia. In sixteen cases of hernia complicated with strangulation, when all the ordinary means of reduction had failed, the whole number was successfully treated by the application of ice, conjoined with methodic and permanent local compression.

In order to reduce such hernia, it is evident that first of all, the attention must be directed to the reduction of the excessive development of the tumor, occasioned, as it is well known, by the arrest of the capillary circulation, and by the production of sanguineous congestion. To effect this resnlt ice is of all agents with which we are acquainted the most efficacious. We have two things to expect of it, which it never fails to confer, namely: first, the driving back of the fluids with which the hernia is engorged; and secondly, to put an end to the inflammation, which soon brings about gangrene, if measures are not interposed to prevent it. The effects of ice on a strangu-

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lated hernia, are, to drive back fluids, to allay pain, to condense the intestinal flatus, to efface the hernial tumor, to remove the danger of inflammation, and especially the danger of peritonitis, so often fatal.

Should the ice produce only the latter result, and afford time to arrest the rapid march of danger, should it render precipitancy on the part of the surgeon unnecessary, and enable him without danger from temporising, to exhaust the milder resources before resorting to the knife, a most valuable agent is presented, and one which we are justified in placing the greatest reliance.

The repulsion of the fluids, and the condensation of the expanded flatus, superinduces in the herniaed parts, a diminution of volume, which gives full power to the taxis, previously powerless.

Spontaneous reduction may take place under the influence of refrigerants alone. We can cite three examples of this. But when it does not thus take place, we must aid in bringing it about, by assisting the ice with a compressing bandage. This joint action has always, up to the present time, succeeded in our hands.

When the tumor is so painful that the least compression cannot be borne, we most always begin with the ice alone. The pain once assuaged, we can, if we judge proper, apply a spica bandage, which is to be covered with pounded ice. In order to give this bandage a continued contractile action, analogous to the fingers, we must provide an elastic band of caoutchouc. The special bandage we call the *spica-taxis*.

We know that the ordinary taxis can be but little applied when the tumor is inflamed and very painful. We know that there is danger of bruises and even lacerations, however cautious we may be, for the intestine is much less resistent in a state of inflammation. The compression of the taxis, preceded and accompanied by ice, made by an elastic band, does not expose the patient to this danger. To efficiently assist, the pelvis ought to be elevated, in order to facilitate by their gravity the return of the protruded viscera.

It is under these circumstances, after having exhausted, in vain, the whole list of means recommended for the reduction of a hernia, that the surgeon has no other resource except the knife.

In sixteen analogous cases, being the whole number up to the present date, in which we have had occasion to resort to our treatment, we have been enabled to avoid celotomy; and all the patients have obtained prompt reduction of the hernia. These cases are detailed in the memoir presented, and of which we here present a summary.

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We are thoroughly convinced that ice is destined to produce a complete revolution in the treatment of traumatic lesions. During twenty-four years, it has constantly responded to our efforts. If it has not yet triumphed, it is owing to the fact that nothing is so difficult to eradicate as prejudice, and especially error. We leave it to the Academy to determine whether or not we have put forth a well grounded and certain guide, and established the truth of the principles we have adopted.—*Ibid.*

Two Interesting Cases. By J. C. Nott, M. D., *of Mobile.*

Protrusion and Sloughing of Entire Rectum.—In April last, I was requested by Mr. T., a well known merchant of Mobile, to see his child, a daughter, then about fourteen months old. She had been fretful, and her mother discovered that a small quantity of blood had passed both from rectum and vagina. The child, a few days before, had swallowed and thrown up some fragments of brown straw, and it was surmised that a piece might have passed down into the rectum, and protruded through into the vagina; but no straw was seen in these parts. I directed a dose of oil, flax seed tea injections into rectum and vagina, and quiet. In a few days all seemed well again, and nothing occurred during the summer to attract attention.

About the 20th September, the child became uneasy, and passed a little blood again, and on the 22d, I was sent for in haste to see it, but being absent from my office, Dr. Inerarity was requested to call, and found about six inches of intestine protruding from the *anus*, with the lower end free and unattached. Seeing no immediate indication, he proposed not to interfere before my arrival, as I was the family physician. I saw the child with him a few hours after, and found, as above stated, the bowel protruding. On examination, it seemed that there had been an abscess and ulceration around the *sphincter ani*, that the perineum had given way, thus throwing the rectum and vagina together, and that the large intestine, cut loose from its lower attachments, had passed entirely out to the extent of six inches. The child was in pain, cried violently, and made all possible resistance during the examination, and in fact, prevented us from making as full and fair an examination as we wished.

The most important question, however, was, what could be done to remedy the difficulty? It was clear that no good could be expected from stuffing the intestine back into the pelvis; it would certainly be expelled immediately, and our examination even was terminated as quick as possible, as the

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straining effort of the child, while screaming, had a tendency to force down more bowel.

The case was therefore left to nature; the stools passed through the protruded portion every day, and on the fourth day, the bowel being completely sphacelated, I clipped it off close to the anus with a pair of scissors. Since that time, the general health of the child has been pretty good. It had a teething diarrhœa previous to the accident, and has had from two to half a dozen operations during the twenty-four hours ever since. The operations are soft, but sometimes pretty firm and well digested.

I visited the child this morning, (3d of November), six weeks after the accident, and on examination find the parts apparently healed. The lacerated perineum remains and the loose bowels, but otherwise the child seems well. Owing to the determined opposition of the child, it is impossible to make a perfectly satisfactory examination of the parts, but there is good reason to believe that the bowel has formed adhesions near the anus, and that there has been created what an Irishman would call a *natural artificial anus!*

I have not taken the trouble to look over authorities, but remember no similar case on record. On my visit to day, I find that a homœopathic doctor has been called in to the case, and I retire. He has attacked the baby fore and aft with infinitesimals, and I sincerely hope may perform a fundamental miracle.

Case of Acute Phlebitis Simulating Yellow Fever.—This case has raised in my mind a new and curious point in the pathology of yellow fever, which may be worthy of investigation.

The subject was a son of Mr. I. Kirkbride, about nine years old. In March last, he returned from school limping with a severe pain in his groin. I was asked to see him, and found a little swelling, and much tenderness at the point complained of. His mother attributed his complaint to his riding on the rail of the stairs in her house, an amusement which he had been indulging for several days.

The next morning, I found that he had been suffering very much with his limb all night, was still suffering, and had high fever, with very quick and small pulse. In the course of the day, the fever increased; he became delirious, and remained so all night. The third day he had convulsions, and all the constitutional symptoms became much aggravated. He was quite insensible all this day and night, and on the fourth his stomach became irritable; he first vomited simply his drinks, and finally black vomit in profusion. His skin became yellow, and he died in the course of the night, and the corpse presented all the ordinary appearances of a case of yellow fever. There

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was no swelling of the leg, as we generally see in cases of phlebitis, except some puffiness about the groin and upper part of the thigh.

Being rather at fault in my diagnosis, I requested and was permitted to make a post mortem examination.

Autopsy.—The abdominal viscera afforded nothing worthy of remark, except the liver, and this presented the dry, gingerbread appearance described by Louis as characteristic of yellow fever.

On cutting into the groin, the original seat of complaint, I found nothing but a little serous infiltration until I came to the femoral vein. On opening this, I discovered unequivocal marks of acute inflammation, and it was completely blocked up by firm coagulum from the groin to the ham, as far as I traced it.

Now the question is, do the veins play any important part in the pathology of yellow fever? The condition of the liver, and the black vomit, in this case may suggest the propriety of investigation in a new direction.

N. O. Med. News and Hosp. Gaz.

Analysis of Black Vomit in Yellow Fever.—1st. When black vomit is filtered, the coloring matter remains upon the filter, and the filter, and the filtered fluid is colorless.

2. The specific gravity of the filtered fluid varies from 102. to 103.

3. The filtered fluid always reddens litmus.

4. Nitrate of Silver, when added to the filtered fluid, form a large quantity of a white precipitate, which is insoluble in nitric acid, but soluble in ammonia; hence the fluid contains hydrochloric acid.

5. Lime water, kali nitricum, and the other alkalies, form no other precipitate with the fluid, either when submitted to cold or heat.

6. A solution of the bi-chloride hydrarg. produces no apparent re-action with this filtered fluid.

7. Muriate and nitrate of baryta each produces a slight turbulence when added to the filtered fluid.

8. Acetate of lead added to the filtered fluid causes a white flocky precipitate, which is insoluble in water, but soluble in acetic acid; hence mucous exists in the fluid.

9. A precipitate is formed by nitrate of silver in solution being added to the filtered fluid. If kali purum be added to this mixture it deprives if of all acid; and then, afterwards, if sulphuric acid be added to this, a slight effervescence will ensue; hence, we infer the existence of carbonic acid gas in the fluid.—*Virginia Med. and Surg. Jour.*

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Startling Abuses in the Retail Drug Trade in New York.—The Remedy.—There is no business whatever in which the public ought to feel more interest, and to which they pay less attention, than the retail drug trade. If a man wants a dose of medicine, he thinks it sufficient if he get it out of some store with a projecting window with a big red and blue bottle in it. It never occurs to him to consider whether the druggist is acquainted with his business, and a judge of the quality of the medicine which he dispenses.

To qualify a man to keep a drug store, a thorough knowledge of Latin is requisite. He should know at least the rudiments of the Greek language, and be practically acquainted with Chemistry and Botany. He should have such an accurate acquaintance with medicine as to be able, at a glance, to detect impure and spurious drugs. How few of all those in the business are so qualified?

Too often, the drug business affords a refuge to those who have failed in other business. Men who "burst up" in dry goods have succeeded in drugs, and got rich on their little quackeries and nostrums. All these gentlemen stick M. D. to their names, and will "undertake" anything, from the manufacture of "refined liquorice" to the "embalming of the dead," whom they will warrant to keep until the general resurrection.

These pretenders foist off molasses and water as a blood-purifier, under the name or sarsaparilla. They are the sole inventors of some wonderful remedy for coughs and colds.—Their cholera and colic mixture is quite infallible, while their venereal remedies, which they, delicately, style "vegetable elixirs," were never known to fail in effecting a speedy cure.

Many of these empirics have stores in the meaner districts of the city, and it is astonishing what sums they receive for their "advice" from the poor. They lie in wait for thoughtless sailors, and reckless California passengers, and "screw out" of them large sums for medicines to protect them from the diseases and influences of any climate!

A great many drug-stores belong to physicians; but as it is considered *infra dig.* to be connected with a store, they usually carry on the "shop" under another name. In such cases they avail themselves of the services of some unfortunate foreigner, whose necessities compel him to accept of from $3 to $5 a week, the usual pay of drug-store clerks for seventeen hours' attendance daily for six days in the week, and nineteen hours on Saturday.

There is more ignorance or rascality displayed in the drug trade than in any other. The quantity of spurious drugs which is introduced daily in New York is immense. Besides, the

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adulterating of drugs is carried on as a regular business in this city. It is only a short time ago since an advertisement appeared in one of our contemporaries for upwards of a week, "for a person acquainted with the adulteration of drugs." No doubt the advertiser had, to use a business phrase, "a host of applicants." The sale of these adulterated drugs proves one of two things: First, that the retail druggists, being ignorant of their business, buy these drugs as genuine of the wholesale houses; or that, being acquainted with their business, they buy them for the sake of the extra profit which such drugs will fetch. It is not uncommon for even "respectable" druggists to "palm off," at sixpence an ounce, common senna, which costs fifteen cents a pound, for Alexandria, which costs from seven to nine cents a pound extra. Three hundred per cent. profit would satisfy most traders, but the druggists go in for from four to five hundred per cent., and as much more as they can get, but inasmuch as much of their stock is perishable, and they are obliged to keep a large assortment for which there is very little call, this per centage is not as unfair as may at first seem.

From what we have said, some might suppose that the adulteration and imitation of drugs were confined exclusively to the wholesale trade. But such is not the case. Labels for French perfumery and various patent medicines are to be had in all the wholesale stores, and are brought and used extensively by almost every retail store in the city.

Quack medicines, for the sake of the one hundred per cent. profit which they yield, are sold by every retail store in the city; while the most simple analysis or synthesis would show that they are not only deleterious but positively poisonous.

One, who was a farm laborer, then a horse-jockey, and now is self-styled an M. D., who has a store and manufactory a few miles from town, and a "desk" in an office in the city, informed us some time ago of the ingredients of one of his nostrums, which is regularly advertised as "one of the blessings of the age," and asked our opinion of it. On our expressing our surprise at his daring to sell such stuff, he admitted that the "blessing was a little too strong," and that on being *dared* to drink a twenty-five cent bottle of it, he nearly killed himself, although he vomited the whole in half an hour after taking it.

As the imitation and adulteration of drugs is not confined to the wholesale houses, neither are all the other rascalities in the business to be laid at their doors.

Our readers cannot fail to have noticed the great number of drug-stores which are daily advertised for sale in all parts of the city. The preparing and stocking of these stores for sale

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is carried on as a regular business. An old mechanic or bankrupt dry goods man has sometimes two stores "doing an excellent family business, in most desirable localities," for sale. Before the stores are advertised, a complete supply of tinctures is made up—and such tinctures! The directions of all the dispensaries are set at nought. The tinctures (!) are made up without regard to quality. Cheapness and profit are the only objects in view. A complete stock of the best imitation of genuine medicines is laid in, fictitious transactions are entered in the "Daily Cash Book," and the daily sales are increased by a convenient medical process. And now the store is ready for sale.

The ignorance of those in the drug business, and the negligence and carelessness of physicians, lead to innumerable mistakes, many of which prove fatal.

The United States, London, Edinburgh, and Dublin, publish each a *Dispensatory* or *Pharmacopœia*, for the guidance of apothecaries and physicians. Many of the names for the same drug are entirely different in each of these works. It might be supposed that our medical men would confine themselves in writing their prescriptions to the nomenclature of that very able work, the *United States Dispensatory*.

Such, however, is not the case. It would be difficult to say where many of them picked up their Latinity. It would astonish the men of a much later period than that of *Cæsar* or *Cicero*.

We have recently had access to upwards of two thousand prescriptions. About fifteen hundred of them showed that the writers were entirely ignorant of the declensions to which the various nouns used belonged. Many of them were written in pencil, and almost illegible. If a medical man be applied to in bed for a prescription, he may be excused for using a pencil, but in no other situation. Before a prescription reaches an apothecary it is, not uncommonly, well creased and thumbed, and, if in pencil, next to illegible. No patient who is able to pay his physician should accept from him a prescription in pencil, or one which is indistinctly written. Such lead only to mistakes.

When an erroneous prescription is presented at a drug-store, the prescription, if the druggist be ignorant of his business, is made up exactly as it is written. If the druggist knows the nature and quality of medicines, the prescription should be sent to the physician to be corrected. But as no professional man likes to be convicted of an error, it is very seldom that he hears of his own mistakes. A conscientious apothecary informed us that when he first commenced business, he made a practice of sending all erroneous prescriptions back, but as he invariably lost the custom of the medical men to whom these

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were sent, he changed his system and corrected the mistakes himself.

We are informed of a fatal mistake which occurred a few weeks ago. A prescription in which a most unusual quantity of prussic acid, with three or four other ingredients, was ordered and left at a drug-store. The clerk of the store hesitated to put up the prescription in the absence of his employer, and, unwilling to lose a little custom, stated that it was necessary to send down town for one of the ingredients, and that the medicine would be ready in an hour or two. The patient was anxious for the medicine, and sent twice for it. He soon called a third time, and stated that if it was not ready, to give him the prescription, and his father would get the medicine elsewhere. The prescription was returned and made up by some one more ignorant or less scrupulous, and next day the lady was dead of a diseased heart! Diseased hearts cover a multitude of mistakes!

It frequently happens that some drug is ordered which is not in the store of the apothecary to whom the prescription is presented. In such a case, if he be an unscrupulous person, he substitutes some drug of what he considers a similar quality for the one in question. A case of this kind occurred some time ago in the practice of an acquaintance. He was attending an Engineer of a Southern steamer, who was suffering severely from fever and ague. After giving very powerful doses of quinine, the physician ordered podophyllin. The prescription was taken to a drug store in the vicinity of the wharf at which the steamer was lying, and the proprietor having no such medicine, supplied jalap in its stead. Next morning the patient was raving mad, and had to be transferred to the City Hospital, and lost his berth on board of the steamer. When the physician called next day at the drug store to examine the podophyllin, he was so astonished at its effects, he was informed by the apothecary that his clerk had not much experience, and had used the one medicine for the other!

Numerous mistakes occur in stores which frequently change owners. Drugs, in such stores, are put into jars, bottles, and drawers, with names applicable to other medicines. This, too, is frequently done, as some unprincipled druggists say, to test the ability and knowledge of their clerks. It is nothing uncommon to see a whole "nest of drawers" without a single label on them.

A narrow escape from culpable carelessness of this kind occurred in a well-frequented drug store which recently changed proprietors. The clerk's account of the mistake was that, when busy in making up a long *minim* prescription, a girl entered the store crying, and asked for three cents' worth of a

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medicine very little used. A jar, on which were a gilt and a paper label—the latter intending to intimate that it bore the name of the medicine it then contained, which was that asked for—was hurriedly taken down for the first time that the clerk had been in the store, and the girl was served out of "her turn." Most providentially, the physician was waiting beside his patient, a child, to administer the medicine, when he discovered that a drug had been sent which would have destroyed life, with great agonies, in a few minutes. So much for false labels!

If medical men were aware of the absolute trash which is sold for medicine, they would be careful in recommending particular stores. While many physicians accept of twenty-five per cent. on the amount of business which they send to the stores of their friends, such recommendations will be viewed with suspicion. They should abandon a per centage which, to say the least of it, is deserving of reprehension.

What then, you ask, is the remedy for this state of things? We answer—first, in so far as the public is concerned: Avoid all stores in which there is a continual change of clerks, and especially if you should be satisfied that they are not receiving more than $5 a week. No competent person, except in extreme distress, would accept of such a sum. Avoid all dirty stores; all stores, which, from a patch-work like appearance—jars of various sizes and of different patterns, with dissimilar labels—give evidence that they have changed hands repeatedly; all stores where everything is not carefully labelled; and where there is a total absence of anything like system. If you see one set of tinctures on one side of a store, and another set opposite; oils divided in the same manner; spirits, essences, and syrups ranged together, and roots, flowers and seeds jumbled together, and other things in similar confusion;—though you know nothing of medicine, you may be assured that there is neither method nor system in such a store.

Secondly, in so far as the trade is concerned. There are a *few* well educated and thoroughly bred druggists in the city. Let them unite and appoint, for their examination, the very best professors they can obtain in Latin, Chemistry, Botany, and Materia Medica. Let these druggists submit to a searching examination, and obtain a diploma of their qualifications. Such diplomas, by giving the public confidence in their abilities, will increase their business, and leave their uneducated brethren to the neglect they merit.

There is another plan which might be adopted by the public for its safety and satisfaction, but to it we cannot allude in this article.

[The above article we find in the American Medical Monthly,

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copied from the New York Daily Times. It exhibits an amazing amount of depravity and fraud in all departments of the drug business in New York. While it must be confessed that some of the abuses mentioned above are daily practised among us, yet we are satisfied that our Druggists, both wholesale and retail, are a far more honest and reliable set of men than those of New York. How far we are made to suffer from their rascality it is difficult to say, certainly to some extent; as most of our drugs come through this depraved city. This is a subject in which the public is deeply interested, would that we had in our midst a newspaper that could and would expose frauds of this and other kinds, with the ability of the Times.—Eds.]

Remarks upon the use of Beverages in Sickness. By L. A. Dugas, M. D.—Without intending for a moment to undervalue the importance of a judicious selection of the more active remedial agents in the treatment of disease, the writer nevertheless feels persuaded that much of the success of these, very often depends upon the use of proper adjuvants. The signal advantages frequently derived from the opportune administration of an enema, a foot bath, cold effusion to the head, or even a cup of tea, broth, or gruel, must have been obvious to every discerning practitioner. And yet, it is only at the bedside that the young physician can derive much information upon the subject, as these matters of detail, cannot be or are not included in such works of general practice as are usually placed in their hands. Treatises and lectures upon the general principles of practice are unfortunately but little relished by students, while they read and listen with avidity to specific plans of treatment, and never fail to note down any *recipe* that may be proposed. The more violent, heroic and perturbating methods are, however, gradually giving way to milder and more judicious medication; and palliatives consequently increase in importance. The skill of the practitioner will be found to consist more in the relief of existing symptoms, than in the prescription of special formulæ learnt by rote and aimed at a name.

The use of aqueous beverages, especially in acute affections, is now so common that it cannot be a matter of indifference whether the patient partake of the one or the other of the many varieties ordinarily resorted to. The belief that the water they contain is the sole agent of value in their administration, is too exclusive and prevails to too great a degree. By the ingestion of large quantities of water, and the great facility with which it is imbibed by the coats of the stomach

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and intestines, carried into the portal system, and from thence introduced into the general circulation, the blood is diluted and rendered less plastic, whilst the repletion of the vessels thus induced, gives increased activity to the emunctories—viz: the skin, lungs, and kidneys. The experiments of Magendie demonstrate very satisfactorily that the secretions are increased in a direct ratio with the repletion of the blood vessels, and vice versa; that absorption is promoted in proportion to the diminution of the circulating mass. While, therefore, in the treatment of acute diseases, which are generally inflammatory, copious beverages are usually found to be useful, by diminishing the plasticity of the blood, and promoting the elimination of noxious or effete principles, their propriety is very questionable when it becomes necessary to favor absorption, as is frequently the case in chronic engorgements, serous effusions, or other deposits. When venesection is practiced, the volume of blood abstracted is very soon replaced by water; whereas, by withholding such beverage, the partial vacuum of the vessels brings into them the circumjacent fluids with whatever disintegrated matters they may hold in solution. Thus it is that we may satisfactorily account for the agency of depletion and abstinence in the promotion of absorption. Yet it cannot be a matter of indifference whether the drink be acid or alkaline, stimulating or sedative, mucilaginous or acrid, laxative or astringent, nutricious or not. We resort daily to beverages which, in addition to the diluent property of water, unquestionably present one or more of the peculiarities just referred to; and we should endeavor to select such as may be best adapted to each particular case. A brief enumeration of some of those in common use, and an appreciation of their peculiarities, may enable us to present our views more forcibly. They may be advantageously arranged under distinct heads, indicative of their most prominent properties.

Diluents.—Of all beverages, water, at the ordinary temperature of spring or well water, will be generally found the most agreeable, as well as the best, when the desired effect be simply to allay thirst or to dilute the blood. Indeed, the cravings of nature so strongly indicate the propriety of cold water as a beverage, in the fevers of our climate, that one cannot look back without a sense of horror upon the time when patients were pertinaciously denied this luxury, notwithstanding their heart-rending entreaties; when they were compelled to linger through long attacks of sickness, with parched lips and cracked tongue, lest a sip of cold water might perchance disagree with the stomach, check the perspiration, or expose them to mercurial salivation! In no particular has modern practice displayed more good sense and humanity, unless it be in the abolition

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of chains and the lash in the treatment of insanity, than in allowing the sick the free use of cold drinks, especially in southern fevers. A draught of good cold water will often act like a charm, quieting the stomach, and inducing copious excretions from the skin, kidneys and lungs.

The facility with which ice is now procured in most of our towns, has led to the very free use of iced water; and, however grateful and beneficial this may be in many cases, there are circumstances in which the propriety of its use is at least questionable. In irritability of the stomach, with or without phlogosis of this viscus, iced water very generally gives great relief; but in affections of the bowels we think it decidedly objectionable. In both diarrhœa and dysentery, its bad effects are almost immediately marked by the supervention of pain and a desire to go to stool. It should also be avoided in all colicky affections, whether partaking of the nature of obstructions, of spasms or of flatulency. In bowel affections we always give the preference to warm or hot drinks. According to our bed-side observations, iced beverages should be also avoided in pulmonary diseases, and in affections of the head. We have frequently found them to induce paroxysms of coughing and dyspnœa in lung complaints, as well as pain and cerebral disturbance in affections of the brain, while tepid or warm drinks do not produce such effects. The rationale of such consequences is so evident as scarcely to need an explanation. The principle is here the same as that upon which we account for the injurious effects resulting from the exposure of one part of the body to cold when another part is predisposed to or actually suffering from inflammation. No one would think of plunging in iced water the feet of a patient laboring under affections of the bowels, thorax, or head; nor should the stomach be filled with iced water under such circumstances although this organ may be benefitted by cold applications of the kind to its own surface when this is affected. The same remarks may be applied to acute affections of the skin, and old women are therefore not wrong in objecting to iced drinks in scarlatina, measles, and small-pox, however much they may err in insisting upon keeping the body excessively warm.

In the *cold* stage of our fevers we think warm drinks preferable to cold ones. They hasten the termination of the chill and bring on perspiration much sooner; and though they may be more apt to induce emesis, the very efforts to vomit materially determine the circulation to the surface, and consequently abridge the cold stage.

Demulcents.—Under this head we may place all the mucilaginous infusions, as those of flaxseed, slippery-elm bark, prickly-pear, bene leaves, gum arabic, &c. These are nothing more

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than diluents in combination with bland materials. They are regarded as especially appropriate in irritations, more or less intense, of the alimentary passages of the respiratory organs, and of the urinary apparatus. Their use has been so long sanctioned by the profession, that it is not without some hesitation that we intimate a doubt as to their real value, or rather as to their superiority over mere diluents. It can hardly be presumed that the gummy or mucilaginous materials they contain, pass into the circulation unchanged, or without previously undergoing the digestive process. They cannot therefore be viewed as bland applications to any other than the surfaces of the digestive tube. Yet they are continually prescribed as though they were destined to reach unchanged, the mucous surfaces of the lungs and urinary organs. We must confess that we have ourselves been so much in the habit of prescribing infusions of slippery-elm and prickly-pear in affections of the kidneys, bladder and urethra, that we would dislike to abandon them, however much we may be led by theory to doubt their intrinsic efficacy and to attribute the relief to the water and other medicinal agents with which they are administered. We must also say that we have never perceived any advantage in the use of demulcents, as such, in pulmonary diseases,—and that we really consider the one in most common use (flaxseed tea) often injurious, in consequence of the rancidity of the seed usually obtained from the shops, and the indigestibility of the infusion when made very mucilaginous, to say nothing of the unpleasantness of the dose. The other demulcents can be so readily procured in a fresh state, and are so much more agreeable, that we see no good reason for the very general use made of flaxseed tea.

The *aromatic* beverages are infusions of mint, balm, sage, catnip, sassafras, &c. Their chief merit consists in being palatable and therefore well received by the stomach. In many instances they will relieve nausea, when this unpleasant symptom would be aggravated by demulcents. They are also decidedly anti-septic, preventing the evolution of gas by averting the tendency to fermentation, and improving the general tone of the digestive organs, without exerting injurious stimulation of the general system. They are particularly well adapted to typhoid fevers and diseases of similar character.

Catnip tea is a favorite prescription of mothers for crying babes, under the impression that the cries always indicate the existence of colic, and that catnip is a specific for this. I cannot be denied that the little creatures very frequently become quieted and go to sleep shortly after partaking freely of the well sweetened tea; but whether this effect is to be attributed to relief from colic, to some anodyne or soporific property of

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the tea, or simply to the fact that this operates as a substitute for the nourishment the child required, remains to be determined.

Sassafras tea is not unfrequently used in the south as a substitute for coffee and Hyson tea, and is certainly more palatable than either of these, when as wretchedly prepared as they are in many families. Sassafras has been long supposed to possess alterative properties, and has therefore entered into the composition of most of the so-called diet drinks. As we do not, however, profess to understand the true meaning of the term *alterative*, as used technically, and that we consider the diet drinks in common use, as mere tonics or restoratives of the general stamina, we presume that sassafras exerts a beneficial influence upon the digestive organs. And, yet, it is difficult to determine the origin of a prejudice which exists in the minds of many of our people against its habitual use, in consequence of its supposed tendency to the production of intermittent fever. This prejudice is so general in Georgia, that it is supposed to have contributed largely, some years ago, to the defeat of a candidate for the gubernatorial chair, who had in Congress urged an increase of the duty upon tea and coffee, adding that if the enhanced price of these articles proved onerous to some, they might drink sassafras tea. The good people proudly refused to vote for any man who was willing to see them all take the ague and fever, merely for the sake of filling the National treasury! We believe the prejudice to be unfounded—but would like to know if any *facts* can be adduced in support of it.

Astringents.—The only beverages in common use in disease which possess any astringency, are the green and black table teas and the sage tea. This effect is, however, so slight as to be unimportant in general.

Laxatives.—We may class as such the infusions of tamarinds, of dried apples, of dried peaches, of raisins, and of cream of tartar; to which may be added Saratoga water. These are all more or less grateful, and remarkably well adapted to a large class of our diseases, in which the intestines are disposed to be torpid. Those possessed of acidity promote an abundant secretion of bile as well as of gastro-intestinal fluids; hence their common use in warm climates.

Acids.—Lemonade and orangeade are such general favorites in diseases of tropical climates, that they are in some of the West India islands, considered as the most important medication in all affections implicating the hepatic secretion. As an anti-bilious remedy, lemonade is held in an equally high esteem by the Creoles as calomel is by the English, and those who borrow their views. Lemonade, besides being exceedingly grateful to the palate, is highly promotive of the mucous, hepatic,

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renal and cutaneous secretions. The free flow of salivary fluids excited by its contact with the mucous surface of the mouth and the orifices of the ducts that open upon it, will give some idea of its effect upon the gastro-intestinal surfaces and the glands whose ducts terminate in them. The capillary circulation of these mucous membranes and glandular structures must therefore be much relieved of congestion, if any exist. But besides this local action, lemonade doubtless penetrates the general circulation by imbibition, and is carried to the kidneys and skin, whose secretions it manifestly increases. If the fluids of the system are alkaline this is changed and they become acid by the free use of this beverage. Producing such decided local and general effects, it would seem more proper to class lemonade among the potent agents of the materia medica, than among the mere adjuvants. We feel satisfied that the therapeutic value of lemonade, in the treatment of our fevers, from the simple intermittent to the dreaded yellow fever, has not been fully appreciated by those who indite most of the books on our shelves—the British, and our Northern brethren.

Antacids.—There are states of the system in which antacids may be eminently useful, especially if taken largely diluted or in the form of beverages. The officinal lime water, or small quantities of bicarbonate of soda, or of carbonate of potass, may be thus used with plain water. The well water of blue limestone districts is sometimes of great advantage to dyspeptics. A very common error prevails with the nonprofessional public, who believe that soda enters into the composition of the beverage vended in our cities under the name of "Soda Water," which is nothing but water simply impregnated with carbonic acid gas, and without any alkaline properties. The name of Soda Water had its origin in the fact that the carbonic acid gas was formerly obtained for the purpose by the action of acids upon the carbonate of soda, whereas it is now usually derived from marble or some other carbonate of lime. By the addition, however, of a little bi-carbonate of soda to this aerated water, a very pleasant and useful antacid beverage may be made.

Sedatives.—During the prevalence of the Broussaisian doctrine, which regulated nearly all diseases as abnormal irritations or inflammations, sedatives were eagerly sought after, in the vain hope that they would prove to be of general applicability. The distinguished French reformer, however, refused to acknowledge as such any other articles than Prussic acid and asparagine. We may, perhaps, then be excused for placing under the head of sedatives the infusions of the leaves of the orange tree, the lemon tree, and the peach tree, all of which we believe contains more or less Prussic acid. Be this as it

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may, there is no doubt that they are exceedingly valuable beverages in our autumnal fevers. The orange-leaf tea is remarkably palatable to most persons, and in addition to being a good diluent, diaphoretic and diuretic, has a soothing effect that can scarcely be appreciated by one who has not realized it in his own person. To secure its full influence, it should be taken freely when hot, and just made, (by pouring boiling water upon the fresh leaves,) for it soon deteriorates and becomes insipid. In the nervous affections of females, and especially in nervous head-aches, it often acts like a charm. The French make great use of the distilled orange-flower water, a teaspoonful of which they add to a glass of sweetened water;—but we think the orange-leaf tea equally valuable, and this is within the reach of every one who has a garden, as the orange tree grows finely in this region of country, and with less trouble than is required to keep the usual supply of balm, sage, &c.

The infusion of peach tree leaves is peculiarly useful in cases of irritable stomach, whether occurring in our fevers or after a debauch. In such cases, however, it should be made strong and given in small quantities at a time; say a table-spoonful or two, frequently repeated. In cases of hooping-cough, if given freely three or four times a day, it tends materially to lessen the violence of the paroxysms and the duration of the disease. We took occasion many years ago to allude to this use of it, and to recommend it in plantation practice, as safe and valuable.

The last class of beverages to which we shall allude, comprehends those in which *nutritious* elements are added to the diluent. The most common are, water holding in solution gum arabic, sugar, and the various syrups, and teas made of toasted bread, rice, barley, &c. The value and applicability of these beverages are so evident, that we mention them merely for the purpose of completing the subject. Indeed, we have extended our remarks so much more than we had intended when the theme first presented itself to our mind, that we now entertain serious apprehensions that the reader will be poorly repaid for the trouble of perusing them. We would, accordingly, withhold them from our pages, were it not that we still feel that the subject is one entitled to more attention than it has hitherto received, and that the imperfections of this hasty paper may induce others to do better.—[*Southern Med. & Surg. Journal.*

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Researches upon the Anatomy, Physiology, Natural History and Cure of the Tape Worm or Tænia Solium. By BENNET DOWLER, M. D.

General Remarks.—Anatomy and physiology of tæniæ.

An erroneous opinion has prevailed in regard to the study of parasitic worms, namely: that the physician's business lies solely in the treatment, and not in the natural history of these animals. But a knowledge of their origin, causes, laws of development, habits, and natural history, promises more than anything else to lead to the best means for their prevention or removal. Here the physician, more than the mere zoologist, has a motive which should impel him to study. Although, on the part of the physician, the mere hope of enlarging the boundary of his knowledge of nature is laudable, yet he has a higher purpose in view: namely, that of relieving suffering humanity.

Ignorance, empiricism and accident are less likely to lead to useful results than systematic and well directed investigations, and the more so as the subject is profound and difficult. As a proof of the value of anatomical knowledge in therapeutics, it is sufficient to allude to the cephalic extremity of the tapeworm; for, whether there be a head or not, there is a minute, very long, threadlike portion, supposed to be the anterior end of the worm, whence the numerous large joints are doubtlessly derived or developed. Thus the discharge of a hundred yards of fully developed tapeworm from the caudal end promises little if any permanent relief, while the discharge of the cephalic and almost microscopic end guarantees a cure. This subject will be resumed hereafter.

In C. Bonnet's works (7 vols. 4to.), published more than a century since, containing an elaborate description, with plates illustrating the tapeworm, microscopic views of this animal's head have been given. These have been, as I venture to think, servilely copied by his successors, though some have deviated so far as to give a sharp spear-pointed figure to the head, as in Gregory's Practice (1831), and in other works.

In his pathological anatomy, Prof. Vogel (tapeworm, cestoidea) describes the head of this parasite as being "very minute, only becoming evident by the application of magnifying glasses. It then exhibits four lateral mammillary suckers, and between these, in the middle of the head, an arched eminence, in whose centre a minute, scarcely perceptible opening exists; upon this are sometimes seated hooks in double rows"—423. The internal evidence derived from this and many similar statements, as well as from physiological anatomy, shows that the functions ascribed to the microscopic head and cephalic mi-

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croscopic hooks of this animal, are imaginary or rather impossible. No one pretends that he has seen the animal feeding by its supposed microscopic mouth or microscopic suckers, or holding fast to the bowels by its microscopic hooks, as will more fully appear in another part of this paper.

Prof. Vogel continues: "The growth of the worm takes place in this manner: from the neck new joints are continually evolved, which push those behind still further back, and develop themselves in proportion as they regress. The hindmost joints are, therefore, the oldest, and at the same time the most perfect; yet it appears that new joints are developed not only from the neck, but may be introduced between the perfectly developed articulations, even at the posterior end of the animal"—423.

Sir A. Carlisle says, that the head of the tapeworm, when accidentally lost, is regenerated—an assertion difficult to disprove, but still more difficult to prove or believe.

The compilers of the Cyclopædia of Practical Medicine say, "authors who were ignorant of the animal possessing a head, or who thought that it was made up of mutually adhering cucurbitine worms, asserted that new joints were formed at each end to replace those passed by stool. From the time that the head was detected, Andry and others began to believe that it was only to the hinder extremity of the body that such addition was made. At length Pallas and Muller showed that the increase did not take place at either extremity, but that the elongation occurred chiefly in the filiform portion of the animal next the head. The joints of the young tapeworm are so very close and small as to give it the appearance of being merely wrinkled rather than articulated; but on inspection through the microscope it is found to consist of innumerable articulations. The received opinion of the present day is, that the animal gets no new joints, but only develops those which existed from the first in a rudimentary state." Prof. Vogel admits, as above mentioned, that new joints are developed at both extremities of the worm, as well as "between the perfectly developed articulations." Developmental analogy in comparative physiology rather favors the doctrine that the new joints are evolved from rudimentary forms which are multitudinous.

Prof. Vogel says: "When the last joints have attained to their perfect development, and are filled with mature ova, they detach themselves, and, either uninjured or in a state of decomposition, are evacuated by stool. Since the joints, which are thus thrown off, are continually being replaced by new ones, it is absolutely necessary, in order that the annoyance caused by the worm shall cease, that the whole animal, in-

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cluding even the extremity of its head, should be evacuated." —424.

Bremser, a high authority in helminthology, contends that no one has ever seen an entire tapeworm, because the caudal or posterior articulations, impregnated with ova, detach themselves and pass off, while those next the head develop themselves unceasingly.

There has been much blundering about this worm both in and out of the profession. If the animal is developed from the head backward, it is an important point in the cure to ascertain whether the head has been discharged, for the frequent discharge of the posterior joints may be natural: not an indicant of the death or decay, but of the growth and activity of the worm.

Bremser mentions, as an important practical fact, "that of the many hundred persons cured by him of the tapeworm, not a single individual has seen the head come away." Now this is not at all surprising, because the general opinion represents the head as a large and terrific one; whereas it is a microscopic object, and, for this reason, likely to escape the most careful observation.

As a proof that the anatomy of the head of the tapeworm has not been satisfactorily demonstrated, it is only necessary to read the different and conflicting statements by microscopists of the greatest eminence.

The hooks, which surround the reputed mouth of the tapeworm, are variously described, both as to shape, number and function. Invisible to the naked eye, they are, nevertheless, said to be used by the animal for the purpose of laying hold of the mucous membrane of the intestines. That an animal, often many yards in length, should anchor itself firmly in the bowels by these microscopic hooks, is against all analogy. A man-of-war might as well use for its anchor a feather.

In the Museum of Animated Nature (vol. II., 423, fig. 3906), these hooks are represented as amounting to thirteen, while many authors mention only four, or an indefinite number. In the Cyclopædia of Practical Medicine it is said that "the interior of the animal is made up of amorphous cellular tissue, without any abdominal cavity, and that it is often extremely difficult to detect the head of the tapeworm. The head, which is a minute tubercle pisiform body, terminating the threadlike neck, has on its most prominent and anterior part a circular aperture or depression, surrounded by sharp, curved processes or hooks, and supposed by some to be the rudiment of an alimentary canal. These processes are, however, not constantly found, being supposed by Bremser to disappear by age. On the somewhat angular projection on the sides of the head, are

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situated four equi-distant apertures, or suckers, which seem to be two mouths. The depression in front, by some called the mouth, is so minute as occasionally not to be visible without the aid of a microscope. The head is a third or a fourth part of a line, or even less, in width."

This account is inconsistent with itself; for if "the animal is made up of amorphous cellular tissue without any abdominal cavity," which is the true exposition, the assumed suckers and mouth could not perform the suctorial operations like the leech. It will be shown in this paper, according to the latest and best authorities, that these organs and functions are imaginary.

The Cyclopædia, already quoted, continues—"it is by the suckers on their head that they (tæniæ) stick to the walls of the intestines so firmly, that, if force be applied, they break rather than lose their hold,"—a hold by means of the microscopic suckers of a microscopic head! while "prone—long and large, full many a rood," this intestinal "leviathan, with fixed anchor, lies stretched out huge in length," holding fast by invisible suckers! Milne Edwards says that the tænia has no distinctly formed mouth.

M. Beaude (Med. Dict. 2 vols., 1849) described the head, suckers and hooks of the tapeworm as indiscernible by the unassisted eye; they can only be seen by a lens.

Prof. Cruveilhier (Entozoaire's Dict. de Med.) says that the head of the tænia cannot be seen without a strong magnifying glass.

Microscopic suckers which take a hold so firm that the body will break before the animals will let go their hold! By some writers tæniæ are mentioned as being more than half a mile long! Thus, Pliny mentions one three hundred cubits long; the Copenhagen Transactions, one of eight hundred ells; Rosenstein, one of three hundred feet! Robin, cited by Bremser, relates, that a patient who had died after voiding several feet of tapeworm, there was found a remainder, extending from the pyloris to within six or seven inches of the anus. Prof. Stone, of the University of Louisiana, informed the writer of this paper, that on making a post-mortem examination of a Russian, in this city, he found a tapeworm, which from his description must have been much longer than that last mentioned.

"Van Doeveren mentions a peasant who, having taken an emetic, vomited up forty Dutch ells of tapeworm, and might have got clear of more of it, 'if he had not been afraid of puking out all his guts, and for that reason bit the worm off.'"

Physiological or teleological anatomy, often a most reliable guide in such investigations, must repudiate these microscopic hooks as instruments by no means adapted to fix so huge an

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animal to the intestines. It must equally reject the four microscopic suckers or organs unsuited to the alimentation for so large an animal, which has not any structural adaption for this suctorial function.

Comparative physiologists, who assign to the tapeworm the functions of a colossal leech, ought to point out a suctorial apparatus, an intestinal canal, and anatomical adaptions thereunto belonging.

Distrusting my own microscopic and anatomical researches on the tapeworm, I beg leave to call the student's attention to a late learned and reliable authority, namely, Professor Siebold, whose work on the anatomy of the Invertebrata has recently been translated and annotated by a name dear to science, now no more, the late Prof. Burnett, who died in Boston a few weeks since, and who had already acquired, at the early age of 26, the reputation, at home and abroad, of a profound naturalist.

In this able work, Prof. Siebold's sixth class, helminthes is divided into six orders—the second of which, cestodes, includes tænia. He thus describes the latter :

"The panenchymatous body is ribbon-like, having often incomplete transverse fissurations; often it is wholly divided transversely into rings. Digestive organs are wanting. The genital organs of both sexes are combined in the same individual; copulative organs are present; the four cup-like cavities at the cephalic extremity *are imperforate, and not so many oral orifices leading into an alimentary canal.*"

In his first order of helminthes, the cystici, and in the second, cestodes (including tænia), and in the fourth order, the acanthocephali, "*there is neither mouth nor alimentary canal;* in the first two orders there is, however, a system of vessels which may be regarded as a digestive apparatus; but these are designed for circulation rather than for digestion, since their walls are complete throughout, and have no openings, as has erroneously been supposed, which communicate with the suckers of the head; and their contained nutritive material is received by them *through the skin in an endosmotic manner.* It has already been observed that the four suckers of tænia, regarded by Nitzsch as oral orifices, are imperforate at their bottom. Owen (Cyclp. Anat. II. 131) has fallen into a similar error in regarding these organs as mouths"—III. 112.

"The system of vessels designed for the circulation," alluded to in this passage, is supposed to relate to what has been called the *water vascular system*, not blood vessels proper.

Generation of Tæniæ.—All experience seems to warrant the conclusion that no species of worms which are found out of the body can live long when introduced into the human intestines;

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while, on the other hand, it is equally true that the parasitic worms which inhabit the alimentary canal, die when they pass out of it.

The late Prof. Charles Caldwell, of Kentucky, maintained that, inasmuch as the parasitical worms, round and flat, are found in the alimentary canal, and, as he affirms, nowhere else, they must be "produced by abnormal secretion," equivocal generation;" "nature having the power to produce living beings without the instrumentality of specific parentage, all the result of settled laws; "external nature does not produce these animals; from without they cannot be received; with neither our food nor drink are the animals or their eggs swallowed. Both the tænia and the ascaris lumbricoides, and, I believe, the trichuris also, have been found in the alimentary canal of the fœtus in utero. The tænia, moreover, has often been detected in the livers, muscles, and other inaccessible parts."

* * * "A worm was found in the liver of Mrs. H., a lady of some note, who died in Philadelphia, of an unknown disease. The worm was so large as to occupy a great portion of the viscus that contained it, and was of a species unknown to every naturalist who examined it. The dissection was witnessed by the late Prof. Rush, who spoke of it in his lectures; and the fact is recorded in the American Museum."

Although the experiments of Dr. Crosse, with galvanic electricity, were, as some persons thought, favorable to the doctrine of spontaneous generation, yet the microscopic *acarus crossii* thus generated does not seem to be at all conclusive in this behalf, as has been argued in this journal by the late Dr. Hort, not to name others; these experiments by no means prove spontaneous generation, because the microscopic germs or ova of the aforesaid insect may have been introduced into the solutions, or into the air contained in the apparatus used by Dr. Crosse during his prolonged experiments.

The theory of spontaneous generation, of which the tapeworm has been supposed to be an indubitable instance, is wholly inadmissible. All analogy, all research, all zoological and physiological discoveries, tend to disprove or repel this theory, and to reduce more and more the number of supposed examples which have been brought forward to sustain it.

The tapeworm is doubtlessly subject to a series of metamorphoses, alternate generations, the phases of which are to the uninitiated little short of incredible, and to all extraordinary; though recent researches have thrown a brilliant, increasing, and even an unexpected light upon these hitherto obscure transformations of this parasite.

Whether the tapeworm be, as some contend, polyzooic—

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that is, an aggregation or colony of individuals conjoined to each other; or whether it is monozooic, that is, a single animal, will not be here inquired into.

Recent researches seem to show, that the tapeworm undergoes a series of transformations, called alternate generation, before it is developed in the human intestines as a squatter; where only it gets the name and form, and assumes the functions now attributed to it. With respect to several other animals, at least, naturalists have ascertained that the offspring does not resemble the parent until after several generations shall have elapsed. Thus naturalists have ascertained that some insects pass through numerous metamorphoses, some of which take place in the bodies of other animals, and yet the offspring bear no resemblance to the parents until after from three to eight generations, whereupon they complete their double cycle of metamorphoses and alternate generation; returning to their original type or form, so that the great-grandchildren alone, and not the intermediate generations, resemble their ancestral primordial types.

To the casual, uninitiated observer, one of these animals will seem, in its different stages of parent, child, grandchild, adult, &c., as so many separate and distinct animals.

Metamorphosis and alternate generation, are not antagonistic, but may co-exist, or co-incide in the same individual, so that a series of different metamorphoses through a series of generations may be necessary to re-produce in a gradual and progressive manner the original and perfect animal, like that which was its progenitor—each change thus becoming a step towards the perfect finality, though the mode of generation may have been for each stage different—the first may have been by ovulation, the next by gemmation, another by fissuration, and so on. It would be too tedious to quote, on this occasion, full illustrations of these principles from the ablest and latest authorities.

"At certain seasons of the year, the Sculpins of the Baltic are infested by a particular species of tænia or tapeworm, from which they are free at other seasons. Mr. Eschricht found that, at certain seasons, the worms lose a great portion of the long chain of rings of which they are composed. On a careful examination he found that each ring contained several hundred eggs, which, on being freed from their envelop, float in the water. As these eggs are innumerable, it is not astonishing that the Sculpins should occasionally swallow some of them with their prey. The eggs being thus introduced into the stomach of the fish, find conditions favorable to their development; and thus the species is propagated, and at the same

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time transmitted from one generation of fish to another. The eggs which are not swallowed are probably lost.

All animals swallow, in the same manner, with their food and in the water they drink, numerous eggs of such parasites, any of which, finding in the intestines of the animal favorable conditions, may be hatched. It is probable that each animal affords the proper conditions for some particular species of worm; and thus we may explain how it is that most animals have parasites peculiar to themselves." (Agassiz & Gould.—Prin. Zool.—171–'2.)

The cause and the condition—the creation and the development of animal life and form belong to different catagories. The seed enveloped for thousands of years in the cerements of an Egyptian mummy vegetates when it finds the essential conditions of development, as heat, moisture, earth; yet these do not create or produce the seed itself. Thus the ova of the tapeworm may be taken into the stomach in drink, or in animal or vegetable food, and on reaching the intestinal canal, may find the sole and essential conditions in which they can be developed into the form of a tænia, all other ova being lost or remaining undeveloped.

Prof. Siebold says:

"Although most of the helminthes propagate by means of genital organs, yet there are a few species which multiply by *fissuration* and *gemmation*.

"The *fissuration* is always transverse, and differs from that of the protozoa and zoophytes in the fact that complete individuals are not produced, there being only a separation of certain organs from the perfect animal, as, for instance, that of the segments of the body in cestodes. This fissuration is complete or incomplete. In the first case, occurring in the tænia, the segments are detached from the body, and continue to live independently, without, however, ever forming a new individual."—119.

"In the eggs of tænia, the envelop is colorless, and of a very variable, and sometimes quite remarkable form."—123.

Prof. Burnett inclines to the opinion that their development is not from eggs, but buds.—129.

"The entozoa," says Gluge, "must cease to form an especial zoological order, and several of them are now known to be only different stages of development of the same animal. The cysticercus is only a young tænia, and this is only a trematode worm without a digestive apparatus. The acephalocysts and echino ci also appear to be only steps of development of cysticercus."

"Some years ago, Dr. Kuchenmeister, of Zittau, had made

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use of the cysticercus pisiformis, a species of encysted parasite very common in the peritoneum of hares and rabbits, for a series of experiments, in which he caused these parasites to be swallowed by dogs and cats; in the expectation that they would become developed into tapeworms in the intestines of these animals. The trial succeeded perfectly with dogs."

In 1852, "Professor Von Siebold made a report on the experiments which were undertaken some months previously, in the Physiological Institute under his direction, for the purpose of showing the possibility of a transformation of the cystic parasites into tapeworms." The following results were obtained from the experiments "with the cysticercus pisiformis: These entozoa, which are usually about the size of a pea, were given to young dogs, mixed with milk, still inclosed in their peritoneal cysts, and in quantities varying from thirty to sixty." These dogs were subsequently killed, at various periods from three hours to eight weeks:

"After eight weeks, the cysticerci in the intestines of the dogs had attained a length of many inches. The largest were thirty-six to thirty-nine inches in length, and their posterior articulations were provided with a perfectly developed sexual apparatus, and containing many mature ova. Several of those a yard long had already thrown off their posterior articulations, with their mature sexual products. Von Siebold was now able to recognize, in this tape-worm, developed out of the cysticercus pisiformis, the tænia serrata of the dog. The cephalic extremity, the form of the articulations, the structure of the generative organs, and particularly the mature ova of this tapeworm, corresponded in the most perfect manner with the same parts in the tænia serrata. There was no longer any doubt that the cysticercus pisiformis of the hare and rabbit bore the same relation to the tænia serrata of the dog, as the cysticercus fasciolaris of rats and mice to the tænia crassicollis of the cat. Furthermore, the tænia serrata is rarely met with in the intestines of parlor and house dogs; but is, on the contrary, very abundant in hunting dogs; no doubt because the latter are often allowed to devour the entrails of hares killed in the chase, swallow at the same time the cysticercus, and so become infested with the tænia; a circumstance that would naturally be less frequent with parlor and house dogs."

Professor Siebold had already, in 1844, expressed the opinion that the parasitic cysticercus (C. fasciolaris,) found in the liver of rats and mice, was nothing else than an abnormal, dropsical tapeworm; and that it was, in reality, identical with the tapeworm of the cat. (Tænia crassicollis.) He maintained further, that the cysticercus fasciolaris, like all cystic worms, was invariably destitute of sexual organs, and could not multiply

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its species by generation, unless it were transferred to a favorable locality, where it might lose its dropsical condition and develop its sexual organs. These changes actually take place when a rat or a mouse, with a cysticercus fascolaris in its liver, is devoured by a cat. The parenchyma of the liver, according to Siebold, is digested in the stomach of the cat; but not so the entozoon. The parasitic animal loses only its dropsical appendages, and passes, with the digested food, from the stomach of the cat into the small intestine. It then finds itself in a favorable locality, and becomes developed into a perfect tapeworm, with articulations and sexual organs, (tænia crassicollis.) This idea had been first suggested to Prof. Siebold by the perfect resemblance between the cephalic extremity of the cysticercus fasciolaris and that of the tænia crassicollis; and by the fact that there are often found, in the intestines of the cat, several specimens of the tænia crassicollis, in different stages of development.

Although Siebold's experiments with the other species of encysted entozoa, mentioned above, were not entirely finished, he had yet carried them so far with the "cœnurus cerebralis" as to convince himself that this worm also, which is so much dreaded by sheep breeders, becomes developed, in the alimentary canal of the dog, into a tapeworm. (Cited by Prof. Dalton, Buffalo Med. Journal, 1853.)

"M. Blanchard has investigated the habits and mode of development of the fasciola hepatica, an entozoon, very common in the liver of the ox, sheep, &c. In all his researches, M. Blanchard never found any but *adult animals* in these affected livers. In spring, myriads of their ova could be detected in the biliary canals, and ductus choledochus, and throughout the whole length of the intestinal canal; the nearer these ova approached the extremity of the intestines, the more fully developed did they appear. M. Blanchard considers it evident that the ova undergo incubation in their progress, are cast out of the body with the fæces, and again taken into the body with the food in a farther stage of development; on this latter point, however, he has no data for speaking decisively. In the batrachiæ, whose intestines swarm with entozoa, M. Blanchard has never found any but adult, or very nearly adult trematodes. He considers it very probable that in the human subject, the eggs of tænia, &c., are swallowed with the food; in some countries tænia seem endemic. M. Blanchard has never seen worms in the fœtus—their existence is, however, placed beyond all doubt by M. Grätzer."*—(*Rankin's Abs.*

The British and Foreign Medico Chirurgical Review, (Oct.,

*Comptes Rendus, p. 355, 1848.

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1852,) in a critical notice of Van Beneden's work on cestoid worms, holds the following language:

"The labor of such investigations must have been very great. A cestoid worm is not to be found in all its stages in a single animal. Discovered in a cartilaginous fish in an adult state, for instance, the prey of that fish had to be found out, and in these animals the search was carried on for the earlier forms; perhaps, again, the worm was to be found, in its very earliest stage, only in the food of these:—so that the youngest form of the parasite of a ray might be ultimately traced to a crustacean, to a mollusk, or to an annelid."

"Those alone," says Van Beneden, very truly, "who have worked far from their study, know what labor and trouble these researches cost; how wearied one gets in soul and body, when one has to look to everything oneself; to seek out fish then to hunt for their parasites; when these are found, to examine, to dissect, to draw, to preserve them; to make one's notes, and to do everything in a short time,—for, generally, they die very soon, and then undergo immediate alteration."

"In whatever manner the young cestoid reaches its proper locality—the intestine—the succeeding changes are the same. The tail-end rapidly lengthens and enlarges; it becomes divided, in most cases, into well-marked articulations, in each of which a complete set of generative organs is formed. The development of the joints takes place, so that the hindermost is the oldest—the others being developed successively *in front* of one another; differing in this respect from the development of new segments in annelids and myriapods, in which the new formation of segments takes place between the last segment and the last but one. To this state, which is that under which the cestoid worms are commonly known, Van Beneden has given the name of strobila, from a just perception of the close analogy between it and the strobila condition of the medusæ observed by Sars.

Finally, the segments become detached and free, the posterior segment usually dropping off very early; and for these detached segments, to which the old writers gave the name of 'cucurbitary worms,' from their resemblance to gourd seeds, Van Beneden retains the name of proglottis, first applied to them by Dujardin. The proglotides become rounded off at each end, and take on a certain rough resemblance to a distoma; never acquiring, however, any trace of the complicated organization of the latter, though they exhibit independent contractions.—They are, as Van Beneden himself expresses it, but 'a sort of sheath to the sexual apparatus.'

How long they are capable of maintaining this form is wholly unknown; but it seems probable that, discharged among

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the fæces of the animal in which they were formed, they become the food of some of Nature's many scavengers,—of some mollusk, or osseous fish, for instance, in whose intestine the eggs are set free, and the embryos developed into their 'scolex' form. In this state, it would seem that they remain until the mollusk, or osseous fish, is devoured by one of the carnivorous plagiostoms, or some other higher animal, when the cestoid worm starts from its wholly buried and half-dead state, into new life.

By the discovery of these extraordinary facts, the problem of parasitism among carniverous animals seems to be pretty clearly explained."*

Topography of Tapeworm.—The British and Foreign Medico-Chirurgical Review, in an article on the endemic diseases of Sweden, by Dr. Magnus Huss, recently published at Stockholm, quotes thus:

"The inhabitants of the coast of the Baltic, at the head of the Gulf of Bothnia, from Tornea to Pitea, are grievously infested with tænia-lata, or tapeworm. Dr. Wretholm states that in Haparanda, the suburb of Tornea, there is scarcely a family, whether rich or poor, of which some of the members are not afflicted with this disease. He has observed it in children at the breast, who had never imbibed anything but their mother's milk. From the coast the disorder spreads inland, following the course of the largest rivers; and it is ever most prevalent where large surfaces of water are found.

Dr. Wretholm observes: 'As the result of the attention I have paid to this subject for several years, I may observe that the prevalence of tapeworm is in direct ratio to the nature of the soil, and of the water used for drinking. In the higher tracts of land, where the drinking water is derived from springs or from the mountain brooks, tænia is hardly known; but as soon as we descend to lower ground, and especially to the banks of the larger lakes and rivers, where the houses are often built on the former beds of the lakes, and where the water, coming from morasses and bogs, is impure, and derived from wells sunk in the soil, and filled with extractive matter rapidly passing into decay, there tapeworm prevails among persons of both sexes, and in every condition of life.'—(p. 5.)

In Gestrikland, (lat. 60°, 61°) tænia-lata is, again, common as in Lappmark, and the reporting physicians ascribe its prevalence to the great consumption of salmon, a fish much infested

* "We are heartily sorry to find that such labors have seriously impaired the Professor's health, and that we must not hope for a continuation of these researches from the same learned and conscientious observer. We trust, however, that his prognosis is not so trustworthy as his observations, and that we may yet have a renewal of the long series of contributions with which he has enriched the Comparative Anatomy of the Invertebrata."

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with tænia. Is, then, the tænia of the salmon identical with that found in the human species?

The district of Halland is one of the poorest of Sweeden; and here, consequently, uncleanliness is seen in its highest degree. Ascarides are likewise common here; and strangers, who have never before been affected by these parasites, soon complain of their presence when they have settled in the country.

In the district of Smaland, children are constantly infested with the ascaris lumbricoides, while tapeworm but seldom occurs. Children of all ages, and all conditions of life, are equally subject to these tormenting parasites; and females often suffer from them during their whole lives."

Helminthologists of the West, in their views of the topography of the tapeworm, seem to attribute too much importance to rivers, swamps, humidity and low lands. In the East, in the very land where kousso flourishes, tapeworm is immeasurably more prevalent than elsewhere. These lands are high, dry, and to a great degree devoid of rivers, swamps, and depressed basins, as in Arabia, Abyssinia, and the coast of the Red Sea. Mr. Surgeon Vaughn, at Aden, Arabia Felix, in a letter to the London Lancet, says almost all, if not the entire population of those regions, are more or less affected with tapeworms, the kousso being a special blessing of Providence; a medicine within the reach of the poorest shepherd, and infallible in its effects.

Tænia is prevalent in Egypt, Russia, Poland, Switzerland, in most departments of France, and in some other countries of Europe, both insular and continental. In America its topography does not seem to excite, as yet, the attention of helminthologists.

The writer can affirm, from personal observation, that the hilly districts of Western Virginia are incomparably freer from tapeworm than the low lands of New Orleans.

Diagnosis of Tænia.—The diagnosis of tapeworm anterior to the discharge of a portion of its joints, per anum, is often obscure, seldom amounting to more than presumptive evidence. Among the numerous symptoms indicative of the presence of this worm in the intestines, the following are the most common: Convulsive motions in sleep; epileptiform fits; headache; disturbed vision; dark areolæ around the eyes; noises in the ears; itchings in the anal and nasal passages; capricious appetite; morning sickness; water-brash; eructations; vomiting; diarrhœa; intermittent colicky or gnawing or pricking sensations in the stomach and bowels; palpitation; sharp features: debility; emaciation; swooning; febricula.

Tapeworm produces, as might be expected from its enormous size and length, great central irritation, which is speedily

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radiated to the whole system. It produces irritation, without doubt, as a foreign, inert body in the bowels, and, also, as a living, moving parasite. Not that the animal bites and hooks into the bowels, as credulous pathologists gravely assert.—When its large body, with angular serrated margins and articulations, distributed through twenty or thirty feet of the intestines, are all put into commotion, alternately contracting and elongating themselves, and even forming convolutions and dense knots, it is, by no means, wonderful that the patient should suffer gnawing pain and constitutional disturbances.—In the case of one of my patients, who discharged a tapeworm after taking kousso, the worm tied a part of its body into a very artistic knot.

The terrible effects attributed to the microscopic mouth and hooks of the tapeworm, are doubtlessly due to the violent contractions and motions of the animal. A late reviewer accounts for the patient's sufferings as follows:

"Consider the common tapeworm, for instance, with the general structure and habit of which troublesome parasite we have been long tolerably well acquainted. It is known to be found in the intestine of vertebrate animals, and of these only. The head with its four suckers and its proboscis, armed with strong hooks, is fixed in the mucous membrane of its unhappy host, whilst its jointed body 'lies stretched for many a rood' in the intestinal cavity."

The following statistical æthiological statement, by a physician who practiced in the Danubian districts, indicates certain precursory and co-existent diseases, with which tapeworm is, by him, supposed to be connected:

"During the period of twenty years, Dr. Wawruch treated two hundred and six persons affected with tænia; seventy-one men and one hundred and thirty-five women. The oldest person was aged 54; the youngest, 3½ years. Twenty-two were under fifteen years of age, and among these were six girls who had not menstruated. Most of the patients were from fifteen to forty years old. The patients belonged to the middle and lower classes; they nearly all inhabited the district lying along the Danube, or living in low or damp dwellings. They followed very different occupations, and their mode of life was various. It is remarkable that the same conditions which give rise to scurvy in Vienna also produced tapeworm. The articles of food which seemed chiefly to engender tapeworm, were bad bread, meals of milk, butter, cheese, potatoes, pork and mutton, and bad water. The diseases which preceded the formation of tænia were gastric and cutaneous affections, but especially gastric and intermittent fevers. There were observed forty-three cases of intermittent fever, twenty of gastric fever,

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sixteen of typhoid fever, ten of ringworm and herpes, forty-two of itch, eight of scarlatina, thirteen of measles, and two of chronic urticaria. Scurvy, syphilis, chlorosis, and other diseases which affect digestion, were also observed to precede tænia; but, in general, few of the individuals affected with tapeworm, had not had lumbrici when young. The influence of hereditary predisposition, is very doubtful. Dr. Wawruch only saw two instances; in one, a mother and daughter; in another, a father and son, had tænia. Irregularity of the menstrual function seemed common; thus thirteen females had only menstruated at the age of 16 years, twelve at 17, nine at 18, seven at 19, and one at 20. The duration of the disease was from a few months, to ten, twelve, fifteen, twenty, twenty-five, and, in one case, even to thirty-five years. Of the two hundred and six patients, three only, who were foreigners, had *bothriocephalus;* the others had *tænia solium.*"—(*Gaz. Med.*)

Therapeutics of Tænia.—It is not intended on this occasion to enumerate the various remedial agents usually employed in the treatment of tapeworm, one or two excepted.

Anterior to the actual discharge of one or more joints of the tapeworm per anum, as has already been stated, the diagnostics of its presence in the intestinal canal seldom rise beyond a strong probability. Hence the value of such vermifuges as kousso and pumpkin seed, which are never deleterious to the patient, but to the worm only; while almost all other remedies of reputation necessarily disturb the patient's health, often severely, at least for a time. Hence, upon the empirical or experimental principle, an innocent vermifuge is admissible where the indications are even slight and would not warrant the exhibition of pink root, spirits of turpentine, &c.

A careful analysis of the facts connected with the successful administration of kousso for the last six years, notwithstanding its occasional failure, would clearly establish on a firm foundation, the propriety of the class termed anthelmintics, which some writers on the Materia Medica have called in question or openly denied, so far at least as one agent can serve as the type of a class, kousso, for its peculiar power of destroying tapeworm without causing, at the same time, any marked perturbation in the human economy, presents a valid claim to the rights of classification, as being not arbitrary, or spurious, but fundamentally scientific.

The evidence in favor of the unequaled efficacy of kousso as a vermifuge, derived from oriental travelers, and still more from the occidental doctors of Europe and America, is strong, increasing, and incontestable. The Materia Medica scarcely affords a parallel to kousso for the efficacy and certainty with which a given indication is fulfilled. A concentrated view of

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the evidence to this effect would prolong this paper too much, but would show that this remedy, unlike most of the new ones, has not been overpraised.

Many of the so called anthelmintics expel worms by their violent purgative action, which is often injurious to patients, who, for the most part, are already debilitated from the intestinal irritation and consecutive diarrhœa occasioned by these parasites. At the same time, this class of worm medicine is altogether uncertain, very generally failing to dislodge worms.

Kousso.—Kousso, or Brayera, Anthelmintica (called after Dr. Brayer, who made its virtues generally known in Europe,) as met with in the apothecary's shop in New Orleans, appears to consist of broken down calyces, petals, leaves, &c., or of a coarse powder of a dull brownish hue, which, when closely examined by the naked eye, and still more with a magnifying lens, presents many purplish particles, supposed to be disintegrated petals or flowers; the coarser and more predominant portion seems to consist of leaves, their ribs, stems, fibres, &c. This powder* has no well-defined scent, or taste; at first there is a faintly saltish taste, which is soon replaced with one slightly bitterish, astringent, and acrid, somewhat like rose leaves. The tree belongs to the order rosaceæ, and is said to be about twenty feet in height, occupying the elevated table lands of Abyssinia, Arabia Felix, and the shores of the Red Sea.

The kousso grows on the table lands of Tigre, and other parts of Abyssinia, as well as in Shoa.

Dr. Beke, who in 1841,–'2 passed a whole year in these regions, little known, says that, "This tree is found throughout the entire table lands of Northeastern Abyssinia, but appears to require an elevation of upwards of six thousand (perhaps of seven thousand) feet for its growth. Where I found it most luxuriant, was in the vicinity of the source of the river Abia, (Bruce's Nile,) at an elevation of close upon nine thousand feet. Tigre, the Northern portion of Abyssinia, being, on the whole, of lower elevation than the rest of that country, the tree is only found in a few places."

There can be but little doubt that this tree would flourish on the elevated lands of Southern Mexico, and in Central America.

M. d'Hericourt, of Paris, appears to have enjoyed the monopoly of the kousso trade, until lately. The price, originally about ten dollars per ounce, or five dollars per dose, has greatly declined. This article can now be had in New Orleans

*Will kousso deteriorate by age? The affirmative is, it is said, maintained in the East. Hitherto, the article is said to have retained its virtues for years, in Europe.

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at $2 50 per ounce, in phials near the size of the ounce phial of quinine.

It is believed that no kousso has ever been imported into New Orleans direct from Egypt, or Aden, where it is delivered by the caravans. Nothing could be easier than to adulterate this medicine in the state of a powder or broken down petals and leaves. It would, therefore, be advisable to get it in packages of the dried capsules and flowers, as put up in skins, where it is gathered, dried, and forwarded.

The dose is from half an ounce to six drachms, infused for an hour in a pint of boiling water; one-fourth to be taken every fifteen minutes, or half hour, first stirring the mixture, so as to take the substance as well as the liquid.

It should be borne in mind, that the discharge of a portion of the small thread-like anterior extremity of the worm, affords a strong presumption that the head has also been discharged. It is highly probable that the anterior undeveloped end of the worm, when broken into pieces, is not, like the posterior, capable of maintaining an independent vitality in each part; moreover, the head with the adjoining portion, detached from the main body, in a great majority of cases, owing to its minuteness, would altogether escape observation.

During four of the trials with kousso, which I carefully watched, I was not able to discover any marked physiological, or rather pathological effects, due to the remedy itself. The testimony is very strong, going to show that its effect on the economy is either null, or extremely slight. It sometimes acts gently on the bowels, and has been supposed to occasion nausea though rarely, if at all.

The Pumpkin Seed Cure.—The pumpkin (*Cucurbita Pepo*) appears to be next to kousso as a therapeutic agent in removing tapeworm, being a true vermifuge, like kousso, expelling the parasite without producing physiological disturbance in the patient's health.

In the use of this remedy I have no experience. But the testimony in its favor is strong and increasing, though by no means equaling that in favor of kousso. As the medicinal virtues of the pumpkin seed emulsion, or powder, is ignored in the most recent American medical formularies, it is proposed to give a part of the clinical evidences extant, in relation to this and several other articles, in the Excerpta of this Journal, as its introduction here would extend this paper beyond the limit intended.—(*N. O. Med. Journal.*

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PART IV.—EDITORIAL.

NEW VOLUME.

The present issue is the commencement of a new volume—the thirteenth—of our Journal. We have but little to say on the occasion, having no complaints to make, and at the same time feeling that we have but little cause for self-gratulation. Considering the length of time our journal has been in existence the subscription list, it must be confessed is rather limited, amounting to about five hundred, it is, however, steadily on the increase, and if our friends will only exert themselves a little the number of subscribers can easily be doubled. Will they not do it?

There are in the State of Missouri alone, over thirteen hundred practising physicians, a majority of whom, probably, take no medical periodical whatever, and are consequently cut off from all the improvements which are constantly taking place in our ever advancing science; for these are all first heralded to the world by the medical press. It is almost incomprehensible, how in an age like this, and in a profession like ours, any one can contentedly sit still and allow the busy world of science and art to move so rapidly on and yet feel no interest in knowing what is going on around him. To all such, whether in this, or in adjoining States, do we appeal, and would urge them for their own sakes, as well as for the sake of their patients not to remain any longer without subscribing for a medical journal. If ours does not suit, this need be no excuse, for there is no difficulty in finding good medical periodicals in all parts of the country.

In our last issue, we announced that the publishers had determined to reduce the price of subscription to *two dollars* a year, if paid in advance, but if not paid in advance *three dollars* will be charged as heretofore.

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ST. LOUIS MEDICAL SOCIETY.—At the annual meeting of the St. Louis Medical Society, held on the evening of the 6th inst., the following officers were elected for the present year, Dr. John S. Moore, President, Dr. George Walker, Vice President, Dr. S. Pollak, Treasurer, Dr. E. F. Smith, Recording Secretary, and Dr. E. S. Lemoine, Corresponding Secretary.

The society, we are pleased to state, is in a most flourishing condition, the weekly meetings are attended by a large number of our most active and intelligent physicians, and the discussions which takes place, as well as the papers read, are generally speaking, both interesting and edifying.

In this connection, we may also state to the credit of the medical profession in St. Louis, that there is as much harmony and good feeling prevailing among its members here, as is to be found in any city in the United States of which we have any knowledge.

NASHVILLE *vs.* PHILADELPHIA AND THE REST OF CREATION.

The last number of the Nashville Medical and Surgical Journal, in an article headed "Fulfilment of Prophecy," quotes from an address delivered and published by the editor, some two years ago, in which after looking through the glorification spectacles, and viewing the "manifest destiny" of his own highly favored city, he seems to have been seized with the spirit of prophecy and ventures the prediction that in the short space of five years, Nashville is to become the great centre of Medical Education for the Western Hemisphere—rivaling New York and Philadelphia, and of course distancing all inferior cities and towns. In alluding to this veritable prophecy, and seeing as he thinks unmistakable signs of its speedy fulfilment—the editor in the article before us uses the following language:

"Well, two of the five years have elapsed, and the competition between Nashville and Philadelphia has already begun, all other, which indeed in our mind never existed, having faded out. Now comes the tug of war—Nashville to Philadelphia, Greek to Greek, face to face, toe to toe, helmet to helmet, and

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battle axe to battle axe. The South holds the victory in the hollow of her hand. She here represents the god of battles. Oh, South, on whose banner shall victory perch? If upon thy children, speak, that they may bless thee, and giving thy proud ensign to the breeze, see it float in triumph amid the clouds! If not, speak also—let the barbed quiver of infanticide strike thy own, and no murmur of complaint shall thy duteous offspring, even while dying by thy hand, utter against thee."

Whether we regard the above merely as a specimen of grand and lofty boasting, or as an exquisitely touching appeal to sectional prejudice, it is equally inimitable in the one case or the other. It reminds us very much of an anecdote that we remember to have once heard, and which also occurred in Tennessee. On a certain occasion, during court week, in Sullivan county, when there was a large crowd collected in and about the court yard, a celebrated braggart, who seemed anxious to impress the by-standers with the belief that he was a real fire eater, stepped out in front of the crowd and with a loud voice, exclaimed, WO BE TO SULLIVAN COUNTY IF I STRETCH MY ARM IN HER THIS DAY!! And yet, as the story goes, before night he was whipped five times and driven off the ground.

Really the extravagant pretentions set up by Nashville strikes us in no other light than as supremely ridiculous, but while we thus speak: we certainly have no disposition whatever to underrate the real merits of Nashville as a point of medical education, on the contrary, we admit that it is well situated for that purpose, and that the gratifying success which has thus far attended the efforts to establish a school there, proves beyond question that a flourishing institution may be built up, and sustained at that point. We admit, moreover, that the faculty is composed of men of talents and indomitable energy; (but as for their modesty and good taste—if the article before us is to be regarded as a specimen we cannot say so much). But while we cheerfully concede all this and more besides, in reference to Nashville, we are very far from believing that the rays of medical science are all to be conveyed at that point, and that there is to be established *the one great National Medical University.*

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The establishment of a great Medical School is not the work of five years or of ten years either, nor is it to be built up by a system of puffing, however boldly and constantly soever it may be practiced, nor yet by railroads and other facilities for travel, still less is it to be done by attempting to array one section of the country against another.

If there is any one point in reference to medical education settled beyond all dispute, it is, that large hospitals which can alone afford ample facilities for imparting clinical instruction, are essential to great schools. It has generally been supposed, moreover, that extensive museums, and an abundance of anatomical material are important elements of success. But what can Nashville claim in these respects? Notwithstanding her boasted superiority, there are more than a dozen cities in the United States which far surpass her in these respects. Large hospitals and an abundance of anatomical material can only be had in large cities, and it is the extreme of folly for a provincial town to attempt to rival the great commercial cities of the country in matters of this kind, and any such attempt only tends to excite ridicule.

As to the attempt to build up a southern school of medicine, on the ruins of northern institutions, by an appeal to sectional prejudice, although a southern man by birth, by education, and in feeling, we confess we have no sympathy whatever with any such unpatriotic design. Our advice to students has always been to frequent those schools which possess the greatest facilities for imparting a sound and thorough medical education. If these facilities are to be found in the greatest abundance in Philadelphia, New York, Boston, St. Louis, or Charleston, resort thither, if on the contrary, they are to be had only in Nashville, then resort thither; but in no case shall our judgment be biased by the consideration that one is north and the other south of Mason and Dickson's line. Medicine is a broad and liberal science, based on certain general principles, and the objects of medical education are best attained where the student is most thoroughly grounded in these general principles irrespective of all localities. The sooner, therefore, it seems to us, that those who wish to build up *great medical institutions* cease to prate about railroad facilities,

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southern rights and the like, and turn their attention to those things which constitute the real merit of a school, the sooner will they be likely to attain permanent success.

Acknowledgment.—We are in receipt of several medical works, besides a number of pamphlets and addresses—all of which, will be noticed hereafter. We have also received the seventh volume of the "Transactions of the American Medical Association," to which we will pay our respects in due time. From the slight examination that we have thus far given the volume, we cannot see that the Association has *gained much* by transferring the publishing committee from Philadelphia to New York.

MEDICAL MISCELLANY, SCISSORS, AND PEN.

Nature in Disease.—Dr. Jacob Bigelow, of Boston, has just put forth a work with the above title, which from all accounts is in every way worthy of the high character of the distinguished author.

Extirpation of the Uterus.—A case of total inversion of the uterus of many years' standing, in which extirpation of the entire organ was successfully practised by Dr. E. Geddings, is reported in the Sept. No. of the Charleston Medical Journal.

Collodion in Orchitis.—Professor Costes relates cases of this disease in which, after covering the scrotum with a mixture of 20 parts of collodion and 5 of ol. ricini, the swelling and pain were quickly relieved, and a rapid and complete cure was obtained.

Artesian Well.—The artesian well in process of digging by Mr. Belcher, of this city, for the purpose of supplying his sugar refinery with pure water has reached over 2,200 feet in depth, and the boring is still progressing. At the depth 700 feet a vein of salt water was struck, and at 1500 feet a large vein of sulphur water, said to be similar to the Blue Lick water of Kentucky, was encountered, from which large quantities have continued to be poured out ever since. Would it not be well to collect this instead of importing the Kentucky water which is done largely during the spring and summer?

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Asylum for Inebriates.—There is a strong probability that an asylum for the reception and treatment of confirmed drunkards will at last be instituted in this country. A committee was appointed by the Legislature of New York, last winter, to organize an institution to be known as "The United States Inebriate Asylum, and to act as Commissioners to receive subscriptions to the capital stock of said Asylum." This committee have submitted a statement to the public in the New York papers, and appeal to the generosity of the community for the necessary funds, which we trust will be furnished.

Minie Rifle.—A cast of the foot of a boy wounded by the Minie rifle was recently shown to the Surgical Society of Ireland, in order to attest the difference between a wound inflicted by a conical piece of lead, as propelled from a rifle of that description, and the round bullet fired from a musket. The physician who explained this case, stated that his impression was, that if a Minie shot struck with force against the cartilage of the ribs, it would go directly through the body and transfix a man like an arrow, instead of passing around and escaping behind at the back.

Dr. Beale, the Dentist.—The case of this unfortunate individual has excited considerable interest. Strong doubts are entertained by many who have studied the case carefully as to his guilt, and we confess that we are among the number of those who share in these doubts. He is now undergoing the penalty of the law, and there being no regular work carried on in the Philadelphia county prison, at which Dr. Beale, could be advantageously employed, he is allowed to officiate as an assistant in the apothecary's department, and he also performs all the dental operations required by the other prisoners.

Obituary.—The death of Dr. Golding Bird will be regretted by every lover of science throughout the world. This event took place in London, on the 27th of October last, at the early age of 39 years. Dr. Bird is well known as the author of an able work on Urinary Deposits, and singular enough he died of renal disease. We have also to announce the death of Prof. Edward Forbes of the University of Edinburgh, which took place on the 18th of Nov. Also in the 39th year of his age.

Dr. Beale.—The telegraph announces the reprieve of Dr. Beale by the Governor of Pennsylvania.

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POETRY.

The following Ode was written and read by our colleague, Dr. LINTON, at the supper given to the National Medical Association, at its last meeting in this city.

This earth had once a plodding set of fellows,
Compared with those who walk its surface now,
Two of them were required to blow a bellows,
And one to hold each handle of a plow,
They had no gas-lights, banks, or paying-tellers;
To *statu quo* they sure had made a vow—
Reposing in a sort of lazy dignity,
And viewing all things with a bland benignity.

They traveled in slow, terrapin-like stages,
In wagons, or rude boats with tardy oar;
They hunted, fished, or toiled for scanty wages,
And never went upon "a strike" for more;
Ambition *hybernated* in those ages,
And men were satisfied with little lore.
Few, in that night of time, did vigils keep;
The rest indulged in intellectual sleep.

It took a month to cross a narrow ocean—
A week to send a letter o'er a shire;
Motives were weak, and there was little motion;
The son walked in the footsteps of his sire,
Unstartled by a single "Yankee notion."
Few did to objects bold and grand aspire;
And he was looked upon as quite a rover
Who made a trip from London down to Dover.

But lo! a change! Ambition's nap is o'er;
Awakening Genius leaves its kindred sleep;
Roused, man from Nature wrests her secret power,
Nor suffers Isis her dark veil to keep.
To him the elements yield up their dower,
And pliant lightnings on his errands leap;
With steam and telegraph—those powers sublime—
He triumphs over matter, space and time.

A thousand steamers plough the heaving main,
Defiant of its tempests and its waves,
In search of conquest, glory and of gain—
Startling the briny monsters in their caves,
A thousand fiery coursers sweep the plain—
Man's iron lunged and never-tiring slaves;
A thousand whispering wires—the age's wonder—
Speak forth his mandates in diluted thunder.

Man's triumphs who shall limit? will not he
Subdue volcanoes to perform his will;
To turn the wheels of engines yet to be
The master products of Titanic skill?
Will not he drag from out the Northern Sea,

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Icebergs, to cool the tropics, and fulfil,
All that progressionists have ever taught,
And e'en transcend the wildest flights of thought?

Will he not ride the tempest's wings as clouds,
And sweep to all the goals of his devotion?
Will he not visit distant climes in crowds,
Scorning the tardiness of earth and ocean?
May he not yet construct electric shrouds,
And magnets graded to celestial motion,
With which to rig and guide some strange balloon
That shall make weekly visits to the moon?

The world has progressed—what of the physicians?
Have they gone forward with the march of ages—
Have they advanced in all their grand divisions,
Surpassing all their venerable sages?
They have—and we could note the vast additions,
Which mark their progress in its various stages.
We Doctors, more than other men, aspire,
Besides, in starting, we were *rather higher*.

Hippocrates and Galen were above
All of the Greeks and Romans of their time;
Assimilated to the immortal Jove,
By benefactions reaching every clime;
And down, till rolling years shall cease to move,
Their names shall be as bright as in their prime.
The memories of the Cæsars may decay,
But theirs are shrined in everlasting day.

Along the past horizon cast your eyes:
There shine a Celsus, Rhazes, Averhoes—
Our stars of science deck the midnight skies
That shrouded Earth's last empire in its woes.
And brighter still a galaxy doth rise,
Where star on star with radiant splendor glows:
There shine Morgagni, Haller, Boerhaave, Stahl,
And others that would take the night to call.

But more of them at random let us name,
VanSwieten, Sydenham, and Ambrose Pare,
The Hunters, Gregories, Bells—twin stars of fame—
And there are Cooper, Dupuytren and Larrey,
And Lisfranc, who an equal rank doth claim;
And bright as any in that dome so starry,
Are Rush and Physick, whom our glorious nation
Has added to the brilliant constellation.

A crowd of worthies throngs this hall to-night—
Full many a Boerhaave meets the enchanted view,
Full many a Pare beams upon the sight,
And crowds of Hunters are around us too,
And Rushes, strong in intellectual might,
And Broussais, bright as Paris ever grew:
Alas! my humble muse has not the power
To chant the triumphs of this festal hour.

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Nor can she do full justice to the story
Of what our science for mankind has done;
Its brows are wreathed with never fading glory
On the wide fields of mind's arena won;
And though its locks with centuries are hoary,
'Tis stronger than the morning it begun;
It has a God-like mission to fulfil,
And with it brings to men on earth good will.

On the same occasion, Dr. WRIGHT, of Ohio, read the following in reply to a toast.

As this sumptuous feast is o'er,
And friend with friend may meet no more,
Let mem'ry's chain unite each heart,
Long past the hour that we must part.
Cannot our thoughts, like stars at night,
Twinkle their own benignant light?
And though far distant to the eye,
Bedeck the same expanded sky?
Why will we strive to disagree,
'Bout tweedle dum and tweedle dee?
Let us all ride in trot or gallop,
Give senna tea, or salts, or jalap;
Use chloroform to deaden pain,
Or twist the joints to cure a sprain;
Give pills or powders, oil from liver,
Cold water baths from sea or river;
Just as we each can best command.
Or may suit most the case in hand;
And let no one presume to bind.
To his own will a brother's mind.
Death is a monster strong and grim,
With countless agents aiding him.
If with him we would wage a strife,
'Gainst sudden death, for longer life,
Let us in one long line unite,
And call to union, will and might.

While we are on the subject of poetry, those of our readers who have not already read the following from Dr. O. W. Holmes, of Boston, cannot fail to be amused and edified by the perusal.

—

The Stethoscope Song—A Professional Ballad.

There was a young man in Boston town,
He bought him a Stethoscope nice and new,
All mounted and finished and polished down,
With an ivory cup and a stopper too.

It happened a spider within did crawl,
And spun him a web of ample size,

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Wherein there chanced one day to fall
A couple of very imprudent flies.

The first was a bottle-fly, big and blue,
The second was smaller, and thin and long;
So there was a concert between the two,
Like an octave flute and a tavern gong.

Now being from Paris but recently,
This fine young man would show his skill;
And so they gave him, his hand to try,
A hospital patient extremely ill.

Some said his *liver* was short of *bile*,
And some that his *heart* was over size,
While some kept arguing all the while
He was crammed with *tubercles* up to his eyes.

This fine young man then up stepped he,
And all the doctors made a pause;
Said he—the man must die, you see,
By the fifty-seventh of Louis' laws.

But, since the case is a desperate one,
To explore his chest it may be well;
For, if he should die and it were not done,
You know the *autopsy* would not tell.

Then out his Stethoscope he took,
And on it placed his curious ear;
Mon Dieu! said he, with a knowing look,
Why here is a sound that's mighty queer!

The *bourdonnement* is very clear—
Amphoric buzzing, as I'm alive!
Five doctors took their turn to hear;
Amphoric buzzing, said all the five.

There's *empyema* beyond a doubt;
We'll plunge a *trocar* in his side—
The diagnosis was made out,
They tapped the patient; so he died.

Now such as hate new-fashioned toys
Began to look extremely glum;
They said that *rattles* were made for boys,
And vowed that his *buzzing* was all a hum.

There was an old lady had long been sick,
And what was the matter none did know;
Her pulse was slow, though her tongue was quick;
To her this knowing youth must go.

So there the nice old lady sat,
With phials and boxes all in a row;
She asked the young doctor what he was at,
To thump her and tumble her ruffles so.

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Now when the Stethoscope came out,
The flies began to buzz and whiz;—
O ho! the matter is clear, no doubt;
An *aneurism* there plainly is.

The *bruit de rape bruit de scie*,
And the *bruit de diable* are all combined;
How happy Bouillaud would be,
If he a case like this could find!

Now, when the neighboring doctors found
A case so rare had been descried,
They every day her ribs did pound
In squads of twenty;—so she died.

Then six young damsels, slight and frail,
Received this kind young doctor's cares;
They all were getting slim and pale,
And short of breath on mounting stairs.

They all made rhymes with "sighs" and "skies,"
And loathed their puddings and buttered rolls,
And dieted, much to their friends' surprise,
On pickles and pencils and chalk and coals.

So fast their little hearts did bound,
The frightened insects buzzed the more;
So over all their chests be found
The râle *sifflant*, and râle *sonore*.

He shook his head;—there's grave disease—
I greatly fear you all must die;
A slight *post mortem*, if you please,
Surviving friends would gratify.

The six young damsels wept aloud,
Which so prevailed on six young men,
That each his honest love avowed,
Whereat they all got well again.

This poor young man was all aghast;
The price of Stethoscopes came down;
And so he was reduced at last
To practice in a country town.

The doctors being very sore,
A Stethoscope they did devise,
That had a rammer to clear the bore,
With a knob at the end to kill the flies.

Now use your ears, all you that can,
But don't forget to mind your eyes,
Or you may be cheated, like this young man,
By a couple of silly, abnormal flies.

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THE ST. LOUIS

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PART I.—ORIGINAL COMMUNICATIONS.

ARTICLE I.

On the Retention of the Placenta without danger to the Mother, in cases of abortion. By L. CH. BOISLINIERE, M. D., *Physician to the Biddle Lying-in-Hospital, St. Louis, Mo.*

In the practice of midwifery, it must be admitted, that cases of abortion are among the most troublesome and perplexing. Labor, at full term, is almost always a natural and healthy process, whilst abortion is always abnormal and an interruption to the laws of pregnancy. Hence, its dangers and difficulties. Of all these difficulties our object is to consider only that which arises from the retained placenta, and to enquire whether under certain circumstances the placenta cannot be retained without danger to the mother.

Let us first define abortion, viz: labor under the sixth month of utero-gestation, and state farther, that it is only to this period that the following remarks are applicable.

Considered in its relationship to the time of pregnancy at which it occurs, abortion present differences worthy of notice especially in regard to the method by which the placenta is then expelled. Under three months, the uterus, generally, frees itself at the same time of the ovum and placenta. In the following months, the amniotic fluid is first evacuated, then follows the fœtus, and lastly, the after-birth. In the first case, parturition is accomplished by a single act; in the second case,

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it is performed by a three-fold travail, or as a succession of three distinct operations.

But how is it that nature thus changes her process at the different epochs of utero-gestation? Why is not the parturient act always simple or always complex? One cannot here admire too deeply the wonderful resources of that Wisdom which presides over the laws of generation, and selects for their execution the means which are at the same time the easiest and freest from danger. In the first months which follow conception, the placenta is in proportion larger than the fœtus, whilst the contrary occurs after the fourth month and during the remainder of gestation.

In the first case, the placenta and fœtus therefore escape together, the latter by its small size being incapable to prepare the way for the placenta; but in the second case, this burthen is voided with less difficulty on account of the preparation given to the soft parts for its issue by the larger body of the fœtus. Hence the whole difference between the delivery of the placenta after abortion and after labor at term. In fact, if we suppose, that by some accident in a very early abortion the membranes become ruptured before a dilatation of the cervix sufficient to give passage to the entire ovum, what will happen? The fœtus or embryo will be carried away by the eruption of the amniotic waters, and the placenta left behind; the pains will subside and the uterus no longer excited by them to contract, will fall into a state of inertia during which its orifice will close, and the delivery of the placenta be indefinitely postponed: hence this premature discharge of the waters at an early period of gestation, must be considered as indicative of very tedious and unpleasant accidents. The same danger is not to be apprehended from a premature discharge of the waters after the fourth month, because from that time the fœtus, being of a larger size than the placenta, will by its expulsion prepare the escape of that body: by this gradual emptying of the womb, the dangers of inertia are in fact prevented.

What should the accoucheur do, when under these circumstances the placenta is retained in the uterus? We say, if the abortion be at an early period, and the appendages of the

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fœtus be felt in the os uteri, remove them. But we confess that for ourselves we have often found this very difficult to do, when the cervix was closed, which is very generally the case a short time after the escape of the fœtus. Under these circumstances, we have found that our attempts seem to push back the placenta into the cavity of the uterus. It is very well to speak in books, about *placental forceps* and *crochets-mousses*, with which to hook the placenta out of the uterus; we should fear also to hook the lining of the uterus for the placenta, and certainly all these manœuvres are to be used not without the greatest caution and with a constant dread of inducing metritis. Every one remembers the great and serious charges against Mr. Valleix's uterine sounds. A Mr. Wainwright, of Liverpool, proposed to introduce the whole hand into the vagina and with one or at most two fingers to endeavor to extricate the placental mass. This procedure, very painful, in *primipara*, might be borne by a patient who had had children. As for ourselves we give the preference in these cases to galvanism, applied over the womb, especially if there be hemorrhage of an alarming character. Velpeau trusted to ergot. If all these fail, rather than resort to violent or too long prolonged manual attempts, we trust the case to nature, and we have seen the great majority of our patients and those of others entirely recover after more or less time. However, we shall, in order to be impartial, state what will often occur under those circumstances.

In the majority of cases, on the first days that follow this retention of the placenta, nothing particular will occur to the patient. She has perhaps resumed her daily occupations when, without any known cause, intermittent pains are felt in the lower portion of the abdomen, and blood issues through the vulva. The patient will often pay no attention to these first accidents, but they persist, and increase in intensity; they are caused by the placenta acting as a foreign body in the womb and exciting its contractions. These contractions destroy the utero-placental adhesions formerly existing, and the placenta becomes wholly detached in the uterine cavity. This separation is accompanied by hemorrhage, which is occasionally profuse, and kept up sometimes for days by the presence of the

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placenta, so that life may be put in serious danger from the abundance of the loss of blood, although we do not remember to have seen any patient dying of this. Churchill says the same. In these cases, also, after the failure of other means, such as ergot, &c., we would apply the galvanic battery over the womb, and do it with a great degree of confidence in its efficacy.

Sometimes, but rarely, the retention of the placenta will be the cause of serious and even fatal accidents, by its decomposition and absorption. This will be then a real case of putrid or purulent infection—in addition to the above means, appropriate disinfecting injections, might be used locally and antiseptics internally.

Sometimes, after the death of the fœtus it may happen that the placenta preserving its vascular adhesions with the internal surface of the uterus, continues to grow, either the fœtus and cord become atrophied and are entirely destroyed, or the ovum having ruptured, the embryo has been expelled, leaving in the womb only its envelops. These envelops may undergo divers transformations, the most common of which are known as moles. According to Velpau, hydatiform moles are nothing but altered conceptions.

Lastly, according to Nægele, Osiander, and others, the placenta may be absorbed completely in the uterine cavity.

Such are the effects generally observed after the retention of the placenta in abortions. These consequences are not all fatal to the mothers as already seen; and we believe are less to be dreaded than those which imprudent and forcible attempts at removing the placenta would produce.

We will proceed now, and show by some of our observations and cases as well as those of others, such as Cazeaux, Melchiori, G. Capuron, etc.. *that under certain circumstances the placenta* may be *retained without danger to the mother*, and has been so *retained*.

Case 1st. Amelia C., a healthy young woman, married about four months—after indulging in an extra number of polkas and waltzes, the night previous, was taken with pains in the back, soon followed by some loss of blood—having had her last catamenia only a few days before her marriage, and not

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suspecting herself pregnant, thought it was only a return of her menstrua—as she had at times been irregular for two or three months. She paid, therefore, no attention to this discharge, and went about as usual for a couple of days—when in the night, sent in haste for her medical attendant. Since she had retired to bed, pain in the abdomen set in at regular intervals, blood was discharged in large clots, etc., pulse good—an examination was made, and the uterine orifice found slightly dilated but soft—the membranes could be felt getting occasionally tense at each pain, these recurring every ten minutes, and hoping still to save the child, the following treatment was adopted: venesection—(Lisfranc's derivative method)—hot maniluvia, to be continued for an hour at a time, and repeated; sinapisms between the shoulders; the hips to be elevated by pillows, etc.; copious draughts of iced lemonade; thirty drops laudanum in a starch injection, repeated every hour for four hours, and acetate of lead internally. Ordered to have the bed changed and all the clothes saved for my inspection on my next visit. Returned in four hours, things no better, orifice dilated to the size of a half dollar, membranes had ruptured in my absence, found vagina filled with clots, broke them down with finger, lost in them was a three months fœtus, which I brought out—introduced finger to os uteri which was already much smaller—felt the edge of what I took to be a placenta—tried to hook it out, was obliged to desist in the attempt—the patient saying she could not stand any longer the pain the manipulation caused her. Examined again the cloths and continued to examine them very carefully at each visit, without seeing a trace of the placenta. The discharge every day became lighter, but on the fourth day slightly offensive and dark, this continued for three days longer, after which they ceased. I forgot to mention that on the second day towards evening patient had a slight chill, then fever, I began to fear purulent absorption, but as this fever ended the next day by a profuse sweat and a notable tension of the breasts, I took it for what it was, a milk fever. I have entered into some particulars in this case, because it is a type of a number of similar cases I had, and which I feel confident every practitioner has seen many a time. In these cases, I ask, what has become of the

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placenta? It would be difficult to say. Did it pass off gradually by shreds, was it absorbed? One thing is certain, it is, that the patients have all more or less rapidly recovered. Would they have recovered so well and so often, had I given them a metritis by imprudent manœuvres? This is exemplified by the following case.

Case 2d. Patient, aged thirty, in delicate health, and in the sixth month of her pregnancy, had a miscarriage last year. When I came in, saw two dead fœtuses lying on the bed and a midwife very busy pulling at the cord; the patient had already lost a great quantity of blood, was pale, feeble, and very much agitated. The midwife confessed that she had already attempted to remove the after-birth with her hand, but after repeated trials had to desist on account of the patient's sufferings. On examination, I found that the placenta was firmly adherent by one-third of its extent to the fundus of the uterus. After a short attempt at removing it entirely by pealing it off, I had to satisfy myself with detaching only the softer portions of that texture, leaving, according to Dubois' advice, the more solid parts to the care of nature. After this, the uterus contracted, the hemorrhage subsided and every thing seemed to proceed favorably, when on the third day, fever preceded by a chill set in and was soon followed by repeated hemorrhage, fetid discharges, pains in the hypogastric region, and all the other symptoms of a low type metritis. In spite of the most careful treatment the poor woman died on the 25th day after her confinement.

The above case is a very good proof of the inability of the hand to perform what the contractions and subsequent retraction of the uterus have not been able to do; it shows also the danger and sometimes fatal consequences of imprudent manœuvres practised in the cavity of the uterus, in cases of suspected adhesion of the placenta. Churchill says, that under these circumstances it would be extremely wrong to use violence in endeavoring to detach the placenta; if, therefore, says he, we cannot easily effect this, it is better to peel off the placenta all around up to the adhesion, and then to separate the loose part from the adherent portion close around the adhesion, leaving the latter in the uterus to soften and come away

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with the lochia. The placenta, however, undergoes sometimes another transformation, as we shall hereafter see.

In a case related by Dr. Smellie, in which he removed the indurated and adherent portion, the patient died of hemorrhage; and several cases are on record where the cause of death was metritis. Cazeaux relates the case of an imprudent surgeon who perforated completely the uterus in his efforts at extracting an adherent placenta. Death followed. Leroux, notwithstanding his great skill, had in a similar attempt the misfortune to tear off a considerable portion of the internal layer of the muscle of the uterus. In this case, he procured an extremely violent hemorrhage which was happily arrested by the application of the tampon.

Moreover, can it be believed that under these circumstances nature has not provided extraordinary resources, and that having made a mistake in causing this adhesion of the placenta to the uterus, or its retention into that cavity, she has not in reserve some particular and exceptional process to remedy the threatening evils? The gradual retraction of the uterus, tends every day which follows the retention, to diminish the size of its vessels, so that their rupture becomes less dangerous, the placenta is also very generally spontaneously expelled after several days, several weeks, and even several months, and when examined is then seen to present as fresh an appearance as if the fœtus had just been cast off. The integrity of its vascular connections had maintained life and may serve to explain the innocuity of this prolonged retention.

We have also noticed above, that after abortion placentas that have resisted all prudent efforts at extraction generally soon become decomposed and are discharged in shreds, without exposing the patient to serious dangers. If there be untoward symptoms they are easily amenable to treatment. But the placenta may be completely absorbed. Although rare, we can not doubt this result, authenticated as it is by the great authority of such names as those of Velpeau and Solomon. After all, there are facts analogous to this. In extra-uterine pregnancy, for example, at an advanced period, has not the skeleton of the fœtus been often found, all the other solid or liquid parts having been absorbed? Has not the same phenomenon

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taken place in the cavity of the uterus after a prolonged retention of a dead fœtus? Therefore the absorption of a placenta cannot be considered as a more extraordinary fact, especially in cases of abortion, when this mass is of small dimensions, incompletely formed, as in the majority of the cases quoted. It is therefore a fact, the possibility of which can no longer be disputed, but which should however be admitted only with a certain degree of reserve.

In regard to the indications to be followed in cases of total or partial retentions of the placenta *at full term*, we shall content ourselves with referring to the advice, laid down in the standard books on midwifery, especially Cazeaux's, whose usual tact and prudence cannot be appreciated too highly, particularly on this subject.

Having thus far examined the possibility which exists for an adherent placenta to continue to live in utero, for an indefinite period after abortion or even after labor, I shall now present the observation of a case in which a part only of the placenta left in the uterus, was indefinitely retained, without producing accidents.

Case 3d. A woman, aged twenty-eight years, of a strong and plethoric constitution and four months pregnant, after a tedious journey, experienced on the 19th of October, the first symptoms of a threatening abortion. The hemorrhage was profuse. When first seen, patient extremely weak and fainted away every moment. The neck of the womb was opened to a considerable extent and the membranes had ruptured. The fœtus protruded from orifice; but uterine contractions being entirely absent, it neither descended nor seemed to move. Cold applications externally and ergot internally, were resorted to. The hemorrhage soon ceased, and the fœtus was expelled. Immediately after, a portion of the placenta could be felt at the mouth of the uterus. Believing it to be entirely detached, two fingers were introduced and efforts at traction were simultaneously made on that presenting portion and on the umbilical cord. Whilst occupied at this, the woman by a sudden start, changed her position, and a portion of the placenta, of the size of a dollar, was left in my hand, together with the cord, which had ruptured in the interior of the uterus. The orifice

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having rapidly closed, no further attempts were deemed prudent, and the remainder of the placenta was left to itself. No more hemorrhage took place, and the patient recovered without any further accident. During the four following days, sanguineous serosities, mixed with clots, passed off; then the lochia became fetid and after this mucous; but nothing like a placenta was seen to pass. The woman rapidly regained her health, and assured me since that she had never noticed any thing in the shape of a placenta. Two months after, she had a return of her catamenia. She died two years from this time of typhoid fever, without having become pregnant again. Unfortunately a *post mortem* examination could not be procured.

The placenta may also undergo another transformation during its stay in the uterus. It is what we might call the *carnification* of the placenta. And I strongly suspect that such is the case with many so-called moles, or even polypi of the womb. Here is perhaps the process through which this transformation takes place.

A short time after the phenomena of abortion have subsided, the uterus contracts and its cavity gradually diminishes; the placenta, imprisoned in this cavity, must undergo corresponding changes in its forms. However it cannot extend much in thickness, being compressed by the side of the uterus opposite to that to which it is attached. The functions of the placenta having ceased, its blood vessels have become useless; they tend at first to collapse, then to become atrophied or obliterated and change into small and solid fibres. The quantity of blood which that mass used to receive, will then gradually diminish, its tissue will grow denser and it will soon entirely lose its spongy nature and become fleshy. Reduced therefore to a state of vegetation, the placenta remains connected with the uterus, which, itself, grows smaller, day after day, and consequently receives less blood. The placental nutrition follows the same phases; thus must it tend to atrophy. Under these circumstances, the absorbent vessels of the uterus, stimulated by compression, will take off portions or perhaps in certain cases the whole of the placenta.

Thus altered, the placenta constitutes no longer an organ,

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but only a mass without object, presenting an aspect and texture quite dissimilar from its original state. In that condition it may well be considered as a parasitic body of the uterus, to the presence of which this becomes habituated without receiving from it any disturbance. Thus is menstruation seen to be resumed in a regular manner; furthermore another pregnancy may supervene and run through all its periods to the full term. Labor in its turn taking place, the old or atrophied placenta may then be expelled with the new one. It has, under these circumstances, we have no doubt, often been taken for moles, but, as we have seen it before, we considered these as nothing but altered conceptions. Moles, in fact, are perhaps nothing but old placentas, from which the fœtus have escaped and which have undergone the fleshy transformation alluded to above; they may, as every body knows, be retained for a long time in the womb without danger to that organ. In the case that there should be doubt, accessory circumstances will sometimes throw a great deal of light on the subject. Thus, for instance, the presumption that it is question of an old placenta will be great if it was known that in a preceding labor, there had been a retention of that organ. The following case will illustrate this:

Case 4th. A young married lady of a delicate constitution, although in good health, at the ninth month of her pregnancy, was taken with labor on the night of the 5th of March. The bag of water having ruptured, an arm descended into the vagina. Happening to come to her just at this moment, I performed the version without any difficulty, but after having brought out the child as far as the arm-pits, and having freed the second arm, the head resisted moderate tractions and seemed arrested. Then only did I notice a great tension of the umbilical cord. In order to extricate this, I passed two fingers between it and the parietes of the abdomen, and drew it with great caution. It yielded all at once and so suddenly, that I thought I had torn it off, but this error was of short duration as the head very soon came down, and immediately after it, the after-burthen. The cord was whole but extremely short, it being in fact not more than seven inches in length; so that in order to draw entirely the fœtus out, it would have

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been necessary either to cut the funis or remove the placenta; the latter was unconsciously done as seen above. Every thing then became normal, and after an hour it was thought safe to leave the woman.

In the morning, ten hours having elapsed since the delivery, the patient experienced some agitation, violent uterine pains, and a discharge of blood, rather too abundant. Whilst examining her, a more violent return of uterine tenesmus came on, and a rounded body, the passage of which the woman felt very well, was voided through the vulva and followed by a gush of blood. This expulsion over, every thing resumed its natural march, and the patient's convalescence was rapid.

The expelled body was of the size of a small orange with a smooth surface, of a reddish color, without erosion of any kind and unaccompanied with any bag or membranous envelop. On a point of its surface was to be seen an elevated portion, rugous, and coated with small clots, this rugous portion was about one inch in diameter. It was at this point that this body was adherent to the uterus. In the centre of this space was seen the patulous mouth of a large vein which soon after its entrance in the tumor divided into three branches which themselves became subdivided into numerous ramusculi.—Around this vein, the openings of other smaller blood vessels could be plainly seen.

This fleshy mass was of a consistent texture, of a red color, easily torn, and without internal cavity, or bloody deposits in its parenchyma. After maceration, small fibres or cord-like expansions could be detected creeping in its tissue, especially towards its periphery (it was the large vascular net-work which constitutes the root of the umbilical cord); its parenchyma then appeared of a spongy nature and the placental tissue became then manifest. The larger blood vessels were however situated reversely from their position in a normal placenta; those belonging properly to the fœtal circulation were obliterated, and on the other hand, those which served to its nutrition were of a larger size and had established intimate adhesion between it and the uterus.

Expressing to me her warm satisfaction at the discharge of this body, the patient then told me that in the beginning of

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the preceding year, she was confined at eight months, and suffered with a terrible hemorrhage owing to the retention of the placenta which had been left in the uterus after vain attempts at removing it made by the surgeon of her village. Never since had it been expelled. Her convalescence was rapid, and she even thought that she had again conceived before the expiration of the thirtieth day after her first confinement.

The reason why in the above case this tumor preserved so much of the organization of a placenta, is we think, that because, owing to a new state of pregnancy, the uterus had regained after a short time the size it had just lost, and that as a natural consequence, the old placenta could not have suffered a degree of compression sufficient to alter it more deeply, or cause its absorption. Moreover, the new conception became for the uterus a cause of increased vascularity and of greater vital energy, by which were arrested the metamorphoses through which the placenta would have traveled; it continued therefore to vegetate until its expulsion.

It might be asked how can a placenta, adherent to some part of a retracted uterus, be retained there when, by the gradual growth of the uterus from the beginning to the end of pregnancy, this adhesion must, it would seem, unavoidably be destroyed? To this objection, we shall answer that, considering the new transformations that the placenta must have undergone by the effect of the retraction of the uterus after labor, it will be perceived that the adherent surface has become exceedingly diminished and circumscribed, so that it might be compared in size to that of a small coin. Therefore, it must not appear surprising, if owing to this limited surface, the adhesion may continue to exist, especially within an uterus which assumes such enlarged proportions, and whose vitality increases so rapidly. This increase of vitality lends every day more strength to the adhesion by enlarging the vascular connections of the two organs—the vessels between the two being reduced in number but becoming of a larger size, establishing thus more solid bands of union than those which would result from smaller vessels disseminated over a wider connecting surface.

In these exceptional or rather pathological cases of solid ad-

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lesions of the placenta there can remain very little doubt as to the direct communication of the vessels of the uterus and those of the placenta. But in the cases of the normal union of these two organs, the connexion of their vascular system is established, it appears, in obedience to other rules. The very able researches of Robin and Coste on this point can leave but very little doubt as to the mode of nutrition of the placenta when connected to the uterus in a healthy manner. But when the adhesion is of a pathological nature, is there an exception to this mode of nutrition? It belongs to special anatomists to decide fully this question, and they should let no opportunity escape to examine cases of morbid adhesion of the placenta where this organ had continued to exist for some time in the uterus.

We shall present our conclusions in the following manner:

1st. A placenta adhering to the uterus after labor may indefinitely be retained there without danger.

2d. The accoucheur should never forget the possibility of this event, which he should rather encourage, than attempt a forcible extraction of the placenta by violent manœuvres practised upon that organ.

3. There is a great probability of seeing this result take place whenever the uterine contractions have been inefficient in procuring the detachment of the placenta.

4th. The placenta, after the cessation of its special function, when remaining adherent is doomed to vegetate in the exclusive dependence of the uterus; so that it may insensibly disappear for want of nutrition, or by absorption, or preserving still a certain volume it may remain without danger for an indefinite period in the cavity of the uterus.

5th. In this latter case a direct vascular communication is established between the two organs.

Article II.

Mountain Fever. By W. T. Ewing, M. D., *late of California.*

On my way to California I encountered a peculiar form of fever assuming the remittent type, but differing in many respects from any of the numerous forms of remittents, of which

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I had before read or been accustomed to treat. The locality of the disease is the high mountainous regions—hence the name mountain fever—I have never known a case of the disease to occur below an altitude of seven thousand feet above the level of the sea. The first cases that came under my observation occurred at or near the South Pass of the Rocky Mountains, and from thence on to the mountains of California, and even in the mines of the mountains of that country I was frequently called to witness attacks of this peculiar form of remittent fever.

Symptoms.—The first symptom, which admonishes the patient of his approaching illness, is a sudden faintness or languor, accompanied with extreme weariness, and a feeling of hunger as though there was a vacuum in the stomach. Simultaneous with, or immediately succeeding this sensation, the eyes become hot, and feel heavy; a slight twitching of the ciliæ of the eye, and muscles of the face is observable. The skin especially of the face and those parts exposed to the air become red and turgid. The countenance is knit and contracted and expressive of great pain. Excruciating neuralgic pain is experienced throughout the whole body, with a deep-seated aching pain in the bones of the extremities and back. There is also a dull head-ache felt throughout the cranium, but which is more intense over the eye-brows; a slight hot sweat exudes from the skin, scarcely perceptible, however, and resembling that produced by straining in emesis. In some there is a tendency to epistaxis, but this is not a common symptom.

The functions of the circulatory system are impaired; the pulse at the onset of the disease generally exceeds its natural frequency from five to fifteen strokes per minute, and is full and inclined to be corded; but after the disease has existed a few hours, the pulse loses its volume, becomes thready and very frequent; the respiratory function is also interrupted and impeded, the frequency and depth of the inspirations being diminished; a sense of fullness in the region of the chest is also experienced, with sighing respiration as if from an insufficient supply of air; the state of the digestive organs suffer not less than those above alluded to; the tongue at the onset of the attack is redder than natural, and would seem to par-

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take of the same turgidity as that of the external dermoid tissue; at its anterior extremity and along its edges it is studded with elevated papillæ, while the surface of the whole organ is moist or covered with a thick pasty saliva, which causes it to stick to the roof of the mouth. This state of the tongue however only lasts during the first paroxysm, after which it becomes spread out, large and flabby, with a red streak along the centre, with a white or yellowish fur or coating observable on its posterior part. The appetite is impaired, or immediately ceases altogether, though the patient may be despatching a hearty meal at the time he is attacked. The stomach is not particularly irritable, though the patient is conscious of a heavy, dull, aching sensation, scarcely amounting to pain, but yet attended with much uneasiness. He also feels a change of the temperature of the body, which becomes hotter than usual, both to the bystander and to the patient himself, though there is no decided cold stage or chill, yet the patient is harassed by alternate flashes of heat and cold; or in other words, he complains of chills running up his back. The liver and spleen also become involved, as is manifested by the existence of acute pain when pressure is made over the hypochondriac region; the bowels are universally torpid; the patient frequently going four or five days without an evacuation, and when an evacuation takes place spontaneously there is always much aching and tenesmus about the rectum and anus. The fæcal matter discharged is either of a dark brown or slightly greenish gelatinous character, or else black lumps or scybala enclosed in a coat of mucus, this mucus being often streaked with blood. The urinary secretion presents much variety, usually some hours previous to an attack of the disease, the patient passes urine very freely, and the urine passed is clear and limpid; but when the disease is completely developed, the urinary function becomes almost entirely suppressed; or if there is any flow, it is very high colored and produces pain and scalding, when voided. There is at this stage of the disease severe pain in the lumbar region, with numbness along the course of the sciatic and crural nerves—the intellect for the most part remains clear. Yet there was one patient in whom delirium supervened at each paroxysm

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of the fever, slight wandering was also observable in other cases, but it was by no means a common symptom. These symptoms usually last from two to six hours, and sometimes longer, when a gradual remission takes place—the patient now becomes very pale, the countenance seems contracted, the skin slightly wrinkled or corrugated, the pulse weak but frequent, usually ranging from ninety to an hundred and twenty per minute. In this condition the patient remains motionless and begs to be let alone, experiencing but little or no pain if he keeps perfectly still—or perhaps he sinks into an unrefreshing sleep, interrupted by unpleasant dreams; but on the slightest motion there is excruciating pain in the back and joints of the extremities with dizziness of the head. In this state the patient remains ten or fifteen hours when he is called to encounter another paroxysm of fever, which, however, is not so painful as the first. The disease usually assumes the quotidian type.

Duration.—The duration of the fever is very variable. Some slight cases run their course and terminate favorably in the course of five or six days. All the cases which came under my observation except one or two yielded readily to treatment. I mean all the cases that came under my observation in the acute stage.

But in a majority of cases, if the disease is left entirely to itself, that is, without treatment, it continues for weeks, and assumes the typhoid form of remittent fever; the patient after becoming much emaciated is suddenly prostrated by a serous diarrhœa, which speedily terminates his existence. Some, however, do not die thus suddenly, but linger long with that form of disease, termed in this country, Mexican diarrhœa. In others the nutritive functions become so impaired that the organs of digestion cease to perform their office and dropsical effusions take place in the celular and other tissues, the extremities become œdematous—creating that form of disease known in California as land scurvy; but which presents but few of the symptoms common to scurvy.

Convalescence.—The violent symptoms of mountain fever, usually yield readily to prompt and proper treatment; but the weakness of the joints of the extremities and sensation of weari-

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ness throughout the whole body frequently hang on for weeks after all traces of the primary disease are removed. At the favorable termination of the disease a slight desquamation of the epidermis is observable over the whole body. I had no opportunity for autopsic examination in the acute stage of the disease.

Diagnosis.—The diseases with which the mountain fever may be most readily confounded are, common bilious and typhus fevers, and some forms of acute rheumatism. It differs however from common bilious fever in the suddenness of the attack, and in there being but little or no irritability of the stomach at the onset of the disease. It may be distinguished from typhus fever by the suddenness of the attack in there being but little or no accumulation of sordes about the teeth, and by the tongue being flabby and moist throughout the whole course of the disease. Also there is no sudamina or peteehiœ over the region of the small intestines, or any where on the abdomen. It may be distinguished from acute rheumatism by there being no swelling of the painful parts or joints, and the regularity of the quotidian paroxysm. Then, again, we may be enabled to know the disease by the location in which it occurs.

Prognosis. The acute form of the disease usually terminates favorably under proper treatment. Out of twenty-five cases which came under my care, but two died. Some of the cases assumed the chronic form, however, and I had to treat them a long time before they entirely recovered.

Cause.—In regard to the cause of mountain fever, there was great diversity of opinion among the physicians who crossed the Plains in the year 1850. And when we take into consideration the location where this disease first occurs, it being at or near the South Pass of the Rocky Mountains, where the face of the country is rolling and hilly—where there are no ponds of standing or stagnant water—where there are no remains of animal or vegetable matter to decay—where every rivulet that ripples down the mountain's side is as clear as crystal, with a snow white drift for its fountain head—where gentle mountain zephyrs fan the plains eternally, and, where a mucky fog is never permitted to rest. Where the soil is com-

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posed of land, sparsely set with mountain grass. Where there is not a tree or a shrub to be seen, save a few branches of wild sage. Where there is no evident signs of an excess of heat and moisture. Where, in short, there is not a shadow of a cause existing which is supposed to be capable of producing miasm or malaria—that supposed sole cause of all forms of remittent fever. Under these circumstances, when a fever assimilating that of common remittent in many respects springs up in such a locality in opposition to all our preconceived notions relative to the cause of fever, it is not to be wondered at, that there should exist a diversity of opinion. Some held that the miasm had been taken into the system before leaving the frontiers of the western States, and there remained latent, until the fatigue and vicissitudes to which the emigrant was exposed, has caused it to develop itself in the form of mountain fever.

To this theory, however, there are several objections, to-wit: If latent miasm was the cause, why did'nt the disease become developed in some before reaching the top of the Rocky Mountains? Or why does the disease often attack persons in the mountains of California who have resided there for years? Again, why were those who were well provided with all the necessary appliances and conveniences to protect them from fatigue and exposure, with servants to do their work, equally as liable to attacks of mountain fever as those who were less fortunate? Still another argument against the miasm theory is, that the emigrations left the frontier of the western States in the spring; a season of the year when all the western States are admitted to be most exempt from the miasmatic influence?

One curious fact that I observed relative to this disease was, that it seemed to mark for its victims the most robust and healthy persons, who had well developed chests and capacious lungs. While on the other hand, those who were anæmic and consumptive were almost entirely exempt from the disease, and seemed to breathe with more ease and enjoy better health than they had for years previously. Hence a trip across the plains to California has been denominated and justly too—"the consumptive's escape."

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Another theory advanced as the cause of mountain fever—and to this I give credence—is, that the height ascended was such, that the usual pressure of the atmospheric air was removed to such an extent that the air at that altitude had become too thin or rare to support healthy respiration in those who have capacious lungs, and who require a large quantity of air to support their animal economy. That is to say, the atmospheric air is not deteriorated in quality, but deficient in quantity.

Treatment.—The indications in the treatment of mountain fever, are, to relieve the pain, counteract the torpid and constipated state of the bowels, to support the strength and prevent the regular paroxysmal return of the fever. To relieve the pain, if called to a patient during the first paroxysm, I usually administered the following prescription:

℞ Tar. Emetic, grs. jjj.
Sul. Morphia, grs. jj.
Water, ℥ iv.
Mix ft. Haust.—a tea-spoonful to be taken every ten minutes till slight nausea and profuse diaphoresis is effected.

After which, so soon as the stomach become settled, the following prescription was given, to act upon the bowels:

℞ Hyd. C. Mitis. grs. x.
Pulv. Jalap, " v.
Pulv. Rhei., " v.
M. ft. Pills, No. v., to be taken at one dose. Such was the torpid condition of the bowels that we often had to assist the operation of this dose of pills with large doses of castor oil, salts or enemata. If possible it was desirable to get an evacuation from the bowels before administering the anti-periodic.

We used as an anti-periodic, this prescription:

℞ Quinia Sul. grs. xxv.
Pulv. Acacia, q. s.
Mix. Divide into Pills, No. x.
One to be taken every hour during the remission.

As a tonic and stomachic, we used as auxiliaries to the quinine, a decoction of serpentaria; and as a diuretic sweet spi-

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rits of nitre. At the same time watching the symptoms and suiting remedies to any complications that might intervene.

This plan of treatment usually proved successful—though some cases would assume the chronic form in spite of all that could be done. In which case, we have to depend upon aperients combined with diuretics and tonics. Among the tonics the ferruginous preparations and the Peruvian bark proved the most effectual.

Remarks.—If the rarification of the air on the top of the Rocky Mountains is capable of creating a mountain fever of a remittent type, which yields to the same remedies as the fevers of the western States, is it not reasonable to refer them both to the same cause? In one case the fever is produced by altitude rarifying the air—while in the other case the air is rarified by the action of heat upon decomposing organic matter—it thereby causing the particles of watery vapor and the various gases to rise up with such rapidity as to misplace the atoms of the air to such an extent as to render it incapable of supporting healthy action in the animal economy. The air itself not being deteriorated in quality but insufficient in quantity.

Article III.

Remarks upon Rattlesnake Bite. By John B. Alexander, M. D., *of Lexington, Missouri.*

The rattlesnake, the effects of whose bite the writer has had opportunities of witnessing, is the rattlesnake of the prairies; a serpent never attaining a greater length than 2½ feet, resembling very closely the larger variety which inhabits timbered districts, but rather darker in color; more vicious and irritable, often striking without the previous warning so uniformly given by its nobler kinsman. It is a variety peculiar to the prairies; a fact observed in relation to many other animals; distinct varieties being presented by the prairie country, that are not to be met with in wooded regions.

The prairie rattlesnake being a much smaller animal than

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the ordinary rattlesnake, an inquiry of some interest suggests itself as to the relative virulence of the bite of the two animals, and the consequent danger to life resulting therefrom. I have no means of arriving at an accurate conclusion upon this point, but I am satisfied that the bite of the prairie rattlesnake is a poisonous and indeed dangerous wound from having witnessed the occurrence of death as a result of its bite in dogs, in colts and calves under two years of age, and in a single instance, in a small child.

In those cases that have fallen under my notice, intense pain followed the infliction of the bite but it did not continue long. The swelling of the limb has always been uniform and progressive, terminating by an almost abrupt boundary, and attended by that peculiar œdematous condition, livid and mottled appearance, indicating most clearly that the blood contained in the part has deen profoundly altered by the direct admixture of some deleterious and potent agent. I have never observed any affection of the lymphatic glands, nor indeed any decided evidence of the absorption of the poison by the lymphatics; not even are the large veins affected in advance of the swelling, showing that although the poison is probably absorbed by the veins, yet it is not rapidly transported by the current of the blood.

I have never witnessed any high arterial excitement as an effect of the poison. In a few cases considerable emotional excitement existed, which subsided completely before the poison was allowed to diffuse itself through the system, by the removal of the bandage or ligature from the limb. The uniform constitutional effect of the poison under my observation has been an increase of frequency, together with a great reduction of the volume, strength and force of the pulse. In the fatal case that I met with, vomiting occurred in the advanced stages, and signs of commencing putrefaction manifested themselves very early after death.

Vesications containing dark colored serum, are very common upon the most highly swollen portion of the limb, and the wound made by the crucial incision through the bite in the process of cure, almost always presents a sloughing character. I have never known this wound to heal by the first

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intention, and indeed seldom by healthy suppuration and granulation.

All the phenomena attending the introduction of the poison of the rattlesnake into the system, point to an alteration of the blood; and death is doubtless the result of a failure of the heart's action, consequent upon impairment or loss of the vitality of the blood. But if it fails to destroy life speedily, the system rids itself of the poison through some of the excretions.

An accurate knowledge of the chemical constitution of organic poisons might probably direct our efforts aright in promoting their elimination; but since it is very certain that hydrogen and carbon enter largely into their composition, it is more than probable that the liver and the lungs have something to do with this process.

The treatment of this injury, which I will now proceed to detail, has with a single exception, not only proved successful in preventing death in a considerable number of cases, but the cure has been uniformly speedy; leaving no trace of any contamination of the blood by the poison. Our aim should be, first, the prevention of the absorption and diffusion of the poison; secondly, its abstraction from the part bitten; thirdly, the counteraction of its deleterious influence; and fourthly, its elimination.

The prevention of absorption and diffusion of the poison is best effected by the application of a cord around the limb between the bite and the heart, carefully observing to apply it as high as the poison has become diffused. In one case, where the bite was on the foot, the cord had been applied by the friends, in about fifteen minutes after the injury, above the swelling, which by that time extended above the ankle; but it had not been drawn tight enough to arrest the venous circulation, and a slight swelling was perceptible above the cord. An additional cord was applied higher up the limb, and no swelling appeared above this point until it was removed. After the removal of the cords, the limb presented three distinct grades of swelling, each terminating by an abrupt boundary; the lower portion was intensely swollen, the middle portion, the part embraced between the two cords, was moderately

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swollen, while the swelling above the second cord was barely perceptible.

The cord should be allowed to remain on the limb until we have abstracted the poison from the wound, when it is to be removed in the manner hereafter directed.

When a bite is inflicted on any other part than either of the extremities, if any appliance, by which the venous circulation can be arrested, be practicable, it must be employed, but unfortunately this is rarely the case.

With reference to the abstraction of the poison from the part, the best mode most assuredly is, immediately upon the reception of the injury, to excise the bitten part, and to apply caustic freely so as to convert the adjacent structures into an eschar, from which the poison, if any has penetrated beyond the excised portion, cannot be absorbed. But the time for such a proceeding has usually passed by when the physician sees the patient, and the only resource left is to make a free crucial incision through the bite, and apply a cupping-glass as long as blood can be extracted from the spot, after which the bleeding may be encouraged by placing the limb in warm water.

The incision made through the bite never bleeds freely; indeed the parts often separate after the bistoury, almost as dry as in the dissection of the dead body, and the cupping-glass withdraws only a small amount of bloody serum, which I have never known to coagulate.

I never neglect the foregoing proceedings; although the poison may have advanced a considerable distance up the limb, since doubtless, the largest amount will be found still lingering in the immediate vicinity of the wound. The only fatal case that has ever fallen under my notice, was where the bite was by the side of the tendo-achilles of a small child; and finding it impossible to abstract blood from that spot, and indeed not regarding at that time, the measure, an important one, I neglected it. Though the amount of blood drawn be very small, yet much of the poison may be thus removed.

No other agents effect the counteraction of the deleterious

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influence of the rattlesnake poison, so successfully as the diffusible stimulants. And among the agents of this class, the alcoholic may be ranked as the best.

I became acquainted with the virtues of whisky in the treatment of rattlesnake bite, from the old settlers in Missouri, and when satisfied of its efficacy, I spared no pains to gather all the information respecting its use that lay in my power. I was told that it was almost impossible to intoxicate an individual, who had been bitten, but that if intoxication was produced, it could be hailed as the sign of safety. For years afterwards, in such cases, I cupped the part as above directed, gave whisky freely, and to my astonishment produced intoxication in every case readily, and invariably effected a speedy cure. At length, the fatal case, to which I have alluded, occurred. The bite was near the tendo-achilles, and the cupping was omitted. The limb, however, was corded immediately below the knee, and profound intoxication followed the use of the whisky.

Regarding this as the indication of safety, I announced to the parents at the end of sixteen hours from the reception of the bite that their child was out of danger, and directed the removal of the cord. At this time there was intense swelling and commencing vesication below the cord, but not a trace of the poison above it. The remedy I had used, had impaired the excitability of the patient's system and produced some debility, when by the removal of the cord, that most potent of all depressants, rattlesnake virus, was released from its imprisonment to exert its influence upon the heart. Immediately the swelling advanced up the limb as it had done previous to its arrest by the cord; the poison reached the trunk as could be perceived by the swollen condition of that side of the body when compared with the other, and in two hours after the announcement of my joyous prognosis, the heart ceased to beat. My patient was dead.

Here then was food for reflection. Here then was a subject for investigation. I had lost a life that ought to have been saved.

I readily saw that the stimulant had exerted its power while the poison was isolated from the heart by the cord; that harm

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had been done, and that the depressing effects of the poison, had been aided by the previous intoxication; that the whisky was in process of elimination by the lungs when the poison was first allowed to enter the general circulation, and consequently, the poison and the antidote physiologically never met each other.

Thus instructed by this unfortunate case, I never afterwards administered alcoholic stimulants until I was ready to remove the cord; which should not be done for four or six hours, or at least until the cups have effected all that they can accomplish. It should then be merely loosened, and the whisky or brandy given so as to keep the pulse natural or full. And I would here observe, that intoxication should be avoided on account of the debility it induces; a moderate exhilaration is all that is necessary. In one or two hours more I loosen the cord still further, continuing the use of the spirits, and thus by admitting the poison into the circulation gradually, I counteract its influence more successfully than if I were to allow the whole amount of poison that the veins were capable of absorbing, to assail the heart at once. Experience has fully proven the value of this expedient.

To what then are due the beneficial effects of whisky or brandy? Why is alcohol more efficacious than ammonia or other stimulants? Though unable to reply satisfactorily to these questions, yet I am convinced the benefit is not wholly due to the stimulant properties of the alcohol. Not only does it obviate the depression or debility caused by the poison, but there are no severe constitutional symptoms of any kind and indeed scarcely any swelling of the limb above the cord in cases properly treated by it; facts leading to the conviction that the remedy exerts an antidotal power over the poison and disarms it of its toxic properties, as it meets it in the circulation. Not that I believe that alcohol is chemically antidotal to rattlesnake virus, but that it is physiologically so.

Alcohol is not eliminated unchanged by the excretions; its hydrogen and carbon being separated in union with oxygen, by the respiratory process forming carbonic acid and water. Now may not the alcohol in the blood, give rise to the decomposition of the animal poison, by causing the elimination of its

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carbon and hydrogen? May it not give an impulse as it were, to a chemical process that otherwise would more slowly occur?

Organic poisons furthermore undergoing decomposition by a sort of combustion in the system, the process will be necessarily rapid in proportion to the activity of the functions of the circulation and respiration; and the exciting effects of a stimulant will doubtless contribute greatly to this end.

Having no accurate knowledge of the mode of elimination of this poison, no positive directions can be given to aid this process, but I have long been in the habit of stimulating the liver to increased activity, with small doses of calomel during the administration of the spirits, and apparently with great benefit. Diuretics, especially the more stimulating, might also be of service.

In all cases falling under my observation, I have failed to observe any benefit from the various local applications recommended, nor can I well perceive how they can possibly contribute to a cure.

Article IV.

Large Fibrous Tumor removed from the Neck of a Female. By M. Maisoneuve, *Surgeon of Cochin Hospital, Paris. Reported to the American Medical Society of Paris.* By Geo. S. Case, M. D., *of St. Louis, Mo.*

[A Leaf from my Note Book.]

I propose to report a case of a large tumor, which from its size, situation and other circumstances render it one of unusual interest.

A female, aged thirty-five years, presented herself in the wards of M. Maisoneuve, with a large tumor developed in the median and left portion of the neck and producing from its size considerable deformity, as well as much inconvenience and difficulty in respiration and deglutition from its pressing on the trachea and œsophagus.

She arrived in Paris in the month of May, 1854, and consulted several most eminent surgeons, all of whom pronounced

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her case hopeless. After remaining six weeks at *La Clinique*, under the care of M. Nelaton, where she prayed in vain for an operation, she was on the eve of returning to her home to spend the few remaining days of her then miserable existence, for the tumor was gradually increasing. At this time, she was advised to consult M. Maisoneuve, who for boldness and indefatigableness is widely known. She did so on the 18th of June, two days before the operation, and demanded the extirpation of the tumor.

From the size of the tumor, its situation being in intimate relation with the carotid artery, jugular vein, and cervical plexus of nerves, as well as having heard the expressed opinions of others, Mr. M. also hesitated, but the patient insisting, he concluded to operate. He informed his class and others present, that he believed it to be a fibrous tumor, having its origin in or being attached to the periosteum of the cervical vertebræ. That its connexions with the large blood vessels and nerves, he could not tell, but believed they were pushed either in front or behind the tumor. She had first noticed it a little less than three years ago, when from its small size it occasioned little inconvenience, but now was, at times, quite painful.

Mr. M. considered himself justified in operating from the following reasons: Firstly, that she could not live long with the tumor. Secondly, were he affected similarly he should desire its removal; and thirdly, her urgent solicitations for its extirpation.

The operation consisted in making an incision from a point just posterior to the external portion of the clavicle to within a little less than an inch of the ear. From this two other incisions were made after a slight dissection, one extending to the anterior median line of the neck, and the other nearly to the posterior, so that its form was crucial. The dissection now commenced, and after the tumor was laid bare and partially isolated he divided it in two, and removing the inferior half first, divided the remaining half and then removed these parts. The arteries, veins and nerves, were isolated and carefully pushed aside and protected.

Thirty-five minutes elapsed from the time the knife entered

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the skin in making the first incision until the operation was finished, quite a short time, when we consider how firm were the attachments and the magnitude of the tumor. During this time but very little hemorrhage took place, only one artery requiring attention, and tonsion sufficed for it. It became necessary during the operation to make use of very forcible traction by means of erignes, and the dissection was necessarily done mostly by the fingers. Mr. M. remarked before commencing, that it was an "operation where one embarks, not knowing what he will meet, or where he will disembark, and in which every possible precaution becomes necessary."

Upon examination of the tumor, Mr. M. verified his diagnosis. It was found quite large, measuring in its diameter about four by five inches. One portion was marked with a concavity, corresponding to the anterior portion of the vertebræ with which it was in contact. The external face was slightly convex and presented also a slight depression or concavity which received the carotid artery, internal jugular vein and pneumogastric nerve.

Of course an immense cavity was left after the tumor was removed, in which could be seen part of the cervical vertebræ, the cervical and brachial plexus of nerves, the œsophagus, the larynx, the trachea, the carotid artery, the internal jugular vein, and pneumogastric nerve. The flaps were brought together by means of serre-fines and adhesive plaster, and the wound dressed as in ordinary cases.

She was completely under the influence of chloroform during the operation; and several times was on the eve of syncope, requiring most active interference to prevent it.

June 27th, the general health of the patient is good, the wound is healthy, although still deep and suppurating considerably. Two or three weeks longer sufficed to procure complete union and a return of the organs concerned to their normal situation.

Remarks.—It was by this method the tumor was removed, which consists simply in removing piece by piece. The French attach great importance to this method, and already M. Maisoneuve and Chassaignac are quarreling for the honor of priority. They contend that it is peculiarly applicable to fibrous

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tumors of the uterus, and congratulate themselves upon the possession of a method, "that has enabled tumors to be successfully removed, which had been pronounced by the most skillful surgeons incurable."

For our part, we are not inclined to allow to the method or inventor any honor, for common sense, it seems to us, would suggest, even to the tyro in surgery, the idea of division, as far as necessary, when the size or situation of a tumor precludes the possibility of a removal in toto.

Article V.

Singular Case of Arrest of Development. By P. S. Fulkerson, M. D., *of Vintage, Lafayette Co., Mo.*

Believing that the following case will interest the readers of your journal, I forward it to you for publication.

I was called in the month of June, 1854, to attend Mrs. B——, in her sixth confinement, I found the uterus contracting vigorously, and after an ordinary share of suffering, she gave birth to a large male child. After tying and severing the umbilical cord, I passed my hand over the child to ascertain so far as I could by the sense of touch if there was any deformity or malformation, and to my great astonishment I discovered that the left leg from the knee down was wanting. I had the child taken to an adjoining room and withheld this sad intelligence from the mother for a time, lest the mental shock it would necessarily produce would operate to her prejudice; after caring for the mother properly, I examined the child thoroughly and found on the end of the stump (if I may so call it) a well shaped foot of very small dimensions, which seemed to be composed entirely of skin and cellular membrane; the stalk by which it was attached to the stump was not more than the eighth of an inch in circumference. In some three or four days, this imitation foot, for such it was, became shrivelled and dry, and dropped off. On the end of the os femoris I found a well developed patella, quite moveable and as naturally formed as though it had been developed in its proper place.

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Mrs. B—— after taxing her memory to recall something that might have occasioned this freak of nature—finally attributed it to having seen, during her pregnancy, some animal (I disremember what) with its leg broken.

Article VI.

Injection of the Tincture of Iodine in the sack of Reducible Hernia to obtain a radical cure. By B. J. Allen, M. D., *of St. Louis, Mo.*

The priority of the idea of the injection of the Tinct. of Iodine in the hernial sack for the radical cure of hernia, is, without doubt, justly attributed to M. Velpeau, who, ten years since, proposed and performed for the first time this operation; since which time, the operation has been practiced by different surgeons with greater or less success; and lately by M. Jobert, who has modified somewhat the operation of M. Velpeau, making it simpler for the surgeon and much safer for the patient.

I have seen M. Jobert perform this operation a number of times, and in no instance, have I seen any bad effect from the result of the operation, on the contrary, I have seen the happiest results produced by it—such as obliteration of the hernial sack, and permanent relief of the troublesome infirmity. I have the history of several of these cases operated upon by M. Jobert, but it will be unnecessary to give them in detail, let it be sufficient to say, as all who have attended the Parisian hospitals have been able to assure themselves, that the hernial sack of these men became inflamed, swollen, then reduced and obliterated, without the least appearance of danger from serious reaction. After the injections, plastic effusions take place in the hernial sack, forming a sort of tampon which shuts off all issue to the viscera.

The Operation.—M. Jobert performs this operation in two ways, the first consist in puncture and injection; the second in incision, puncture and injection, always opening the hernial sack with the trocar and not with the bistoury as recommended by Velpeau, which might thwart the operation by exposing

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the internal surface of the sack to the contact of air, and by permitting the infiltration of the liquid in the thickness of the scrotum.

Operation by Puncture and Injection.—This means of operating is applicable in all cases where the sack is adherent to the neighboring parts, all the time the vaginal turus is not obliterated, and there exists a hernia of this kind—all the time the sack contains serum, recognized by fluctuation or its transparency, we can without hesitation make the puncture of the hernial sack, in traversing obliquely divers layers which cover them. The trocar must be plunged perpendicularly at first, then obliquely, from above downwards, traversing the different layers which present themselves before it, until it has arrived at a certain depth; the trocar is then directed gently backwards in order to puncture the sack.

The want of resistance and the free movement that we can give to the extremity of the canule, indicates that we have reached the sack, and it is then that the iodine may be injected without inconvenience. These injections are made by M. Jobert with a graduated syringe, the pure Tr. of Iodine being injected. The quantity injected must be in proportion with the extent of the sack: the injection should cease as soon as an obstacle is felt, and instead of withdrawing the liquid by the canule, he removes it by the syringe, which is done by holding the point of the instrument *in situ* and withdrawing the piston; it is then that the canule is withdrawn and a piece of adhesive plaster is applied over the puncture in the integument.

Second means of operating.—This consists in incision, puncture and injection. When the sack is moveable and easily displaced, it is necessary to make an incision before the puncture. This is what M. Jobert calls his mixed procedure.

The operation is performed as follows: While the intestine is protruded an incision from an inch to an inch and a quarter in length is made upon the most dependent part of the tumor, incising several layers of tissue situated beneath the integument; this being done he stops and orders his patient to cough, in order to distend the hernial sack, with a tenaculum this is hooked up, a gentle traction is exercised and the trocar is in-

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troduced close by the tenaculum, the intestine having been previously reduced, and maintained thus by the hand of an aid. The signes indicating that the trocar has penetrated to the cavity of the sack. The manner of making the injections we have indicated above—the operation being terminated he unites the lips of the wound by a twisted suture. What takes place after the injection? Immediately after the introduction and evacuation of the Tr. of Iodine a new liquid is effused into the hernial sack—in twenty-four or forty-eight hours the sack is filled by this new liquid. It is only necessary for the tincture of iodine to touch the serous membrane to a certain extent, in order to insure its action to all the cavity. The inflammation and swelling of the sack remains stationary and preserves a certain fluidity for eight or ten days, after which it diminishes sensibly, and as it diminishes it becomes more consistent and acquires the solidity of wood.

Can we compare this method of injection, after Jobert, with the various and numerous methods which have been put in use up to the present time, for the radical cure of hernia? They certainly cannot, neither as regards the mode of operating or the result.

The methods previously employed have been dangerous and ineffectual and have offered immense difficulty in their performance.

The method of injection after the manner of Jobert, by its innocence and simplicity, promise results very different from those obtained by the previous ways of operating.

Article VII.

Report of a case of oblique Inguinal Hernia, with rare complication, operated upon by M. Gosselin. *Reported by* B. J. Allen, M. D.

A man entered at Hotel Dieu, in the wards of M. Roux, the second day of October last, aged forty-four years, and of good constitution. This patient had an oblique inguinal hernia of the left side, which had existed according to his own account for more than two years, but had been reducible and non-

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painful until within three days previous to his entrance; since which time the patient had been laboring under symptoms characteristic of intestinal strangulation, which were developed after a long and fatiguing walk taken by the patient without his truss.

On an examination of the hernial tumor, made by M. Gosselin, who at that time had M. Roux's services, the integument covering the tumor was found much inflamed, and an examination of the scrotum revealed an abscess of the testicle of the left side, it having never descended into the scrotum. Dr. Gosselin first had recourse to the taxis, the patient being previously chloroformed, but, not succeeding in reducing the strangulated bowel by this means, he resorted to the cutting of the urethra, in which he was assisted by M. Roux.

Dr. Gosselin before operating stated to the class, that he expected to find the testicle in the course of the spermatic canal; this supposition or diagnosis, (if you wish,) was confirmed by the operation.

The diagnosis, if such we may be allowed to consider it, was based entirely upon the abscence of the testicle in the scrotum, as it could not be felt in the course of the canal. The testicle was found upon operating in the superior portion of the canal, it was diminished in size and considerably congested, otherwise apparently healthy; the bowel was found almost in a sphacelated condition, with a slight accumulation of pus between its tunics; it was nevertheless returned, but fearing that it would become necessary to treat for artificial anus. Dr. Gosselin passed a thread through that portion of the mesentery attached to the protruded portion of intestine; the extremities of this thread were drawn through the external wound and attached to the adjacent parts, to enable them to retract the bowel, if its gangrenous condition should render it necessary to form an artificial anus; this being done, the case was dressed as after an ordinary operation for hernia. The patient died the next day.

The rare complication of this case induces its publication. Dr. Pope, if I mistake not, has met with a similar case, his patient I believe recovered. Sir A. Cooper has reported one or two cases of a like character.

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PART II.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

Article 1.

The Unity of Mankind. An Introductory Lecture, delivered before the Class of the Medical Department of the St. Louis University. By M. L. Linton, M. D., *Professor of the Theory and Practice of Medicine. Session* 1854–5. *Published by the Class.*

In this address we have a clear, forcible and exceedingly able presentation of the overwhelming arguments in favor of the time honored, and until very recently, the universally admitted doctrine, that all mankind have descended from one original pair.

The object of the lecturer has been to examine by the light of reason and science alone, the arguments and speculations brought forward by those who deny the unity doctrine, thus meeting them on the ground chosen by themselves, and combatting them with their own weapons. In doing this, he has shown most conclusively, that science, when rightly understood and fairly interpreted, so far from favoring the idea of a plurality of origin, but confirms the unequivocal teachings of Scripture on the subject of man's origin. In the course of his remarks, he meets and exposed the sophistical reasoning and shallow pretensions of the authors of "The Types of Mankind," and other pretended savans.

The first point to be settled in the controversy is, what is meant by the term species? For if mankind belong to different species, instead of being but different varieties of one and the same species, then it is manifestly necessary to point out the exact lines of demarkation between these various species. But it is a little remarkable, that those who contend for the plurality doctrine cannot agree among themselves as to what constitutes a specific difference, nor yet in the number of the species into which the human family is divided. On this subject our author remarks :

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"We say, in common parlance, that there are different *kinds* or species of plants and animals; and we mean thereby, well marked differences which no combination of circumstances can change. The oak is different in kind or species from the willow; the rose from the magnolia; the beech from the walnut. The cat and dog are of different species or kinds; the turtle-dove differs in species from the albatross; the whale from the shark. There may be hybrids between the more closely allied species or kinds, but these hybrids are themselves unfruitful, and thus has nature provided a barrier against the chaos which would follow the indefinite mingling and transmutation of species. Now there are evidently no such wide and well marked differences between men as those mentioned of plants and animals: and those who contend that the Indian and white man are of different species, rely upon those slight differences which may evidently exist in the same species. If fruitfulness *inter se* be a proof of specific identity, then, evidently, mankind are but one species; but if every philosopher is to use the term in his own sense, regardless of the consent of mankind and common usage, then the word ought to be erased from our lexicons. It is a remarkable fact that those who contend that specific differences exist amongst men, cannot agree about the number of the species into which the human family is divided. Now if these differences were well marked and constant, there could be no difficulty in recognizing them. There is no difficulty in fixing the specific boundaries of plants and animals; nor would there be in doing the same with regard to mankind, if there were really different species of men. Some, as Metzan, say there are but two species of men, the white and the black: others, as Desmoulins, divide the human family into sixteen species; Bory de St. Vincent, has fifteen species; Joquinot thinks that there are three species, and the authors of the "*Types of Mankind*," though they also contend that there are many species of human beings, admit what it would be useless to deny, viz: that all the classifications of authors are arbitrary. But if men reallly are of different species, it would certainly not be *arbitrary* to classify them as such. These classifications are arbitrary only because there are no specific marks by which to make the necessary distinctions. Color will not do for a distinctive mark, because there are a thousand shades of color; and the advocates for distinct species would not like to have a thousand of them. If a shade of difference in color be taken as a mark of difference in species, then one sister will be of a different species from another. All of us have seen a blonde and a brunette in the same family. If a difference in the size of the head be specific, then two brothers may belong to different species. If the

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shape of the face be specific, we may find in one set of children three or four species. I have seen in one family, the oval face of the Caucasian, the high cheek bones of the Mongolian, and the median cheek bones of the American. I have seen in one family, the features of the Greek and the Egyptian. And yet young Philosophy would persuade us that these differences, when observed on a large scale are specific; that men, differing in color, and in the shape and size of the head, cannot have descended from one original pair that lived six thousand years ago; that all the varied circumstances of climate and mode of living, the ennobling power of civilization and the debasing tendencies of barbarism, cannot, in thousands of years, have produced the varieties which we see; when the fact is, that many of the differences or varieties are observed in the same family of brothers and sisters. From such facts I should argue thus: if even slight differences in color and size and form may exist in the individuals of the same immediate paternity, it may be supposed that great differences, in all these respects, will be effected by widely differing circumstances operating on the various descending lines of such a family in a few thousand years. It would do well enough to regard the Englishman and the negro as specifically different, were it not for the fact, that there is every intermediate shade. The Frenchman is a shade darker than the Englishman; is he of a different species? The Spaniard is darker still; is he of a different species? The Berber is darker than the Spaniard. How dark must we get before we stick a pin, and say, Ah, here we must end one species and commence another! The Abyssinian is still darker than the Berber; and now we are on the borders of negro-land, and its sable denizens come next. But the negro has thick lips and prognathous jaws and woolly hair: so have many white persons. And then, again, many of the blackest tribes have neither the thick lips, the projecting jaws, nor the woolly hair; for example, the Kafirs and the Yolofs, the Mandingos and many of the natives of Mozambique. The fact is, that the differences in lips, jaws, hair and head of the various nations of mankind, shade off into each other just as their colors do, and afford no gaps to separate them into species: and this is the reason why no two ethnologists agree as to the number of species. We have cyanometers to measure the differences in the color of the sky; perhaps we may yet have a melanometer, by the aid of which our modern philosophers may measure the shades of darkness so nicely as to determine the exact boundaries of the species, from the fairest Caucasian to the blackest African.

But if a shade of difference in color be specific, then one man may belong to two species. Let a northerner reside in

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Cuba a year or two, and expose himself freely to the sun and he will change his species. We have seen, that according to some of our modern classifications, the members of the same family are of different species; but the absurdity of their principles goes even further and makes two or three species of one individual. The metaphysical scissors of Hudibras

> "Could sever and divide,
> A hair 'twixt north and north-west side,"

but our modern savans can bisect all the intermediate degrees. How shall we account for all the shades of difference in mind and body that we observe in the human family? Certainly not by supposing that they are the hereditary traits of as many primeval pairs, for we have seen that children differ from their own parents; and we know that various circumstances are capable of producing many of the observed differences; and we do not know that these circumstances are not capable of producing all of them. We do not know that climate, the modes of living, civilization and barbarism, in short, all the influences, moral and physical, which have operated on men from the flood to the present day, may not have caused all the difference we now behold. Even if this be not a sufficient explanation, the doctrine of the unity of our race will not be affected, for it is easier to suppose that God has degraded men, and families, and races, in penalty for their crimes than to suppose the multitudinous creations involved in the doctrine of a plurality of species."

Our limits will not permit us to follow the author in the various steps of his argument, we must therefore content ourselves with here and there a quotation, showing the general tenor of his remarks. After drawing an irresistible argument in favor of unity, from the similarity of the languages of the various races of mankind, he proceeds—

"Leaving history and written fable, we find that the barbarian and savage who have no permanent records, possess traditions evidently drawn from that earliest of all histories, the Pentateuch. The savages of our own wilderness as well as the wandering Tartar of Asia, believe that all mankind are brethren, and speak of the first pair from which they have descended. In this agree the Blackfeet and Flatheads, of the Rocky Mountains, and the Budhist wanderer on the desert of Gobi.

If then, mankind has descended from a plurality of origins, all the histories and traditions of the world are wrong, and only a few modern philosophers are right. This is impossible; for there is no possible way of accounting for this univer-

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sal agreement except by the admission of the fact, that mankind descended from a common source. All the people of the earth must have had the same origin in order to possess the same traditions. Did they all without knowing any thing of each other invent the same story? This is very clearly impossible. All the facts of science, all the traditions of men bearing on this question accord with the doctrine advanced by St. Paul, in his discourse before the Areopagus at Athens, namely, that the Creator hath made of one blood, all mankind. All that the nations of the earth have to do, in order to be convinced of this truth is to become acquainted with each other. Nations, and tribes, and races, and tongues; whether languishing beneath equatorial fervors or shivering amidst Siberian snows; whether civilized or savage, have only to meet and set down together, and compare notes to become convinced that they are the children of the same parents. Thus the brothers and sisters of one household who have been long separated, who have not seen nor perhaps heard of each other for a quarter of a century, may not be able to recognise one another at first sight. Vast changes will have taken place in their appearances. One may have been darkened by a southern sun; another's brow may be deeply furrowed with care as well as time; the visage of another may be hardened and brutified by crime and his body covered with rags. Emaciated and miserable, some of them may be glad to eat the crumbs that fall from the tables of opulence and seek the companionship of dogs. Others may be blessed with all the advantages of civilization, may fare sumptuously every day, be clothed in purple and fine linen and wear the aspect of refinement and joy. Let them by chance meet again. They will not think of claiming kin with each other. They will perhaps at first look at one another as belonging to different species; but let them only sit down and talk together an hour. Each one will tell the same story of parents and of home; of the brave old oak or umbrageous beach or willow under which he rested at noontide; of the rivulet in which he bathed; of the fields and woodlands through which he wandered; of the hills he climbed, and in general of the cherished though perhaps fading memories of childhood, and long before the conversation of an hour has ended their hearts will warm as the conviction flashes on their minds, that they are brethren."

The next argument in favor of unity is drawn from the moral and intellectual, as well as the physical constitution of the various tribes. He then proceeds to point out the enormous discrepancies which exists among those who adopt what is known as the long chronology, and to show that if man has

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been so many hundreds of thousands of years on the earth as is claimed, that it is strange that no record whatever of the fact has been preserved, and that no older history than the Bible has been or can be found. * * * *

In reference to the interpretation of the first chapter of Genesis, the author of the address adopts the literal meaning of the text, and understands six days instead of so many indefinite periods. In this view, he differs from most geologists, as well as from most modern divines, but we are not quite sure that he is therefore in error. For ourselves, we prefer the plain teaching of Scripture to the random guessing of geologists. He says:

"Theologians should be a little cautious in admitting these speculations of philosophers; for the next theory in fashion may be that the world was created in six seconds instead of six days, and certainly it is as reasonable to contract a day to a second as to dilate it to a million of years. And moreover, no one will dare deny that the Creator could have performed his work as well in six seconds as in six days.

A more desperate supposition, a more reckless interpretation of language cannot be conceived, than that the six days of Genesis may mean six indefinitely long periods. No body ever thought of such an interpretation until geologists pretended to have demonstrated that the world is millions of ages old. Regarding this great age of the earth as a settled fact, frightened theologians, and non-infidel geologists set about reconciling Genesis and geology; and devised the theory of the six long periods. Let us look at this theory for a moment. On the first day according to Genesis, matter and light were created. Now where can the human mind find any data in the bible or in geology, in common sense or even in fancy, by which to determine how long a time was required for matter and light to be created? Science is perfectly ignorant on this point; and to say that a million or a thousand years were employed in the process, is a gratuitous and foolish concession which geology does not demand and cannot demand. The infidel and honest geologist, will think nothing the better of the bible for such a concession as this. On the second day, there was a division of the waters and the arrangement of the firmament. Can human science say how long a time was required for this? The third day witnessed the separation of the land and the water; and the creation of the vegetable kingdom. Does geology furnish any data by which the length of time necessary for the work of the third day to be perform-

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ed? No reasonable being will answer in the affirmative. On the fourth day the sun, moon and stars, were created. How long a time was required for this work? The bible says one day—science cannot tell—compromising theologians say thousands of years; but neither reason nor science has authorised any such compromise. On the fifth day the fish and fowl—the inhabitants of the sea and air—were created. Does geology or reason show that these were created an indefinitely long period after the vegetable kingdom? By no means, for animals, according to the reported facts, existed simultaneously with, if not previous to, vegetables. Geology wants no long period here. One day will answer all the wants of geology, and theologists may keep their long period to themselves. On the sixth day the land animals and man were created. And here again neither reason nor the probable time as shown by the strata of the earth, which elapsed between the epoch of some of the sea and some of the land animals, indicates that thousands of years transpired between the operations of these days. Fossil man has been found as well as fossil fishes, and there is no evidence that the latter were created untold ages before the former. Nothing is better calculated to make men lose all faith in revelation than the twisting of it, by so-called theologians to suit every new fangled speculation of philosophers."

The following is the conclusion of the address:

"In passing over the various topics connected with the subject of my lecture, I have been obliged to be very brief; I have been obliged to leave much unsaid that I wished to say. I am not disposed to enter the province of the theologian, but the fact is, that the natural and theological sciences are so intimately connected, that in discussing the one the other is necessarily brought into view. Nature and revelation have a common author, and are consequently in harmony with each other. Man may array them in attitudes of hostility to each other, by false and distorted interpretation, and thus injure the cause of both. Nature will never contradict revelation. Science will not curse religion, though adjured to do so by infidel philosophers.

When the tents of Israel were pitched on the plains of Moab, Balak, the son of Zippor, sent for Balaam, the son of Beor, to come and curse the invaders; and he took the soothsayer to the high places of Baal and built altars and offered sacrifices. But all in vain, Balaam could not curse whom God had blessed. The enraged king then conducted him to the top of Pisgah, hoping that the prophet would launch his maledictions from thence. But lo, Balaam blessed the chosen peo-

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ple. The lofty top of Peor was next tried; but there, in full view of the God-guarded encampment, the enraptured seer exclaimed, "How goodly are thy tents, oh Jacob, and thy tabernacles, oh Israel!"

Thus has the Balak of modern skepticism called on the Balaam of science to oppose, and condemn, and invalidate the facts and principles of the bible. Thus have its opposers invoked the records of nations, and the monuments of nature to put down, eclipse and extinguish the faith of christendom and the world. Science has been forced upon the tripod in China, in India and in Egypt; but her responses have not satisfied her torturers. She has been tempted in the lonely wilderness, and buffeted in the thoroughfares of civilization. She has been transported to mountain tops, and the pinnacles of temples and pyramids. She has been forced to stand amid the silent grandeurs of fallen empires; to pore over the dead languages of crumbling columns and obelisks; to unwrap the cerements of the grave from long buried generations; to count the successive seas of lava poured forth by Vesuvius and Ætna; to note the march of cataracts amid their thunders; to dig the monsters of by-gone ages from their rocky tombs; to sound the depths of earth's strata, and ocean's bosom; to scan the heavens and grow dizzy in the contemplation of their vastness and their wonders; to measure time and space, and sink beneath the thought of their infinitude, but instead of cursing her heaven-born sister, Revelation, she has intoned in her honor a pean of praise and benediction to be chanted with increasing rapture throughout all coming time."

The bible and revealed religion has nothing to fear from science, since they both have the same Divine author, and can not therefore contradict each other. McP.

Article II.

Manual of Human Microscopical Anatomy. By A. Koelliker, *Professor of Anatomy and Physiology in Wuerzburg. Translated by* George Busk, F. R. S. and Thomas Huxley, F. R. S. *Edited with notes and additions, by* F. DaCosta, M. D. *Illustrated with three hundred and thirteen engravings on wood. Philadelphia; Lippincott, Grambo & Co.*—1854.

This work does not need any recommendation on our part. The great reputation of its author, who has become almost proverbial for his exactitude and ingenuity, will be the best recom-

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mendation. Our task in noticing this book is, to call the attention of the profession to the high importance of this branch of medical science, unfortunately not generally appreciated. Microscopical anatomy is the corner stone of the modern temple of medical science. Without the knowledge of microscopical anatomy the study of physiology becomes an impossibility; consequently, it is equally useful and indispensable for the surgeon as well as for the physician and obstetrician. Medical men impressed with the great importance of our remarks, will find the best opportunity of self-instruction in this work, which goes over the whole subject and is complete in every respect. Here we might make the remark, that practitioners generally appeal to the microscope in pathological cases, and consult it in order to establish the diagnosis. But how can the microscope satisfy those who omit the study of the physiological condition of the tissues? Morbid microscopy can only be based on physiological microscopy—and whoever attempts to derive practical results from this valuable instrument, must necessarily first become acquainted with the normal structure of the system. The microscopical study of morbid specimens is not difficult for one who has studied the normal tissues—just as pathology is but physiology applied.

We cannot omit to state, that the additions of the translators and of the American editor are of some value as far as they complete the literature of those points, on which still exist, controversies among the microscopists themselves.

We must also remark, that the publishers have fully done their duty, to make the American edition as instructive and attractive as possible by a very good print and by furnishing truly artistical engravings. From their zeal, we conclude and expect, that in their second edition they will pay proper attention to the very valuable improvements and changes in the new German edition now in press. From our personal acquaintance with the author, we know that he has entirely revised the generalities, and that he has added his recent discoveries in the organs of hearing. We would consider it a great improvement in our profession to see this book in every physician's library. H.

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ARTICLE III.

Notes of M. Bernard's Lectures on the Blood, with an appendix. By WALTER T. ATLEE, M. D. *Philadelphia; Lippincott, Grambo & Co.*—1854.

We cannot compliment highly enough our young friend, Dr. Atlee, for his ardent zeal in pursuing his professional studies, and for the manner in which he has accomplished the noble task of promulgating that which is newest and most interesting in physiology. This little work is very remarkable in several points of view. First, it shows the course pursued by one of the most eminent experimental physiologists of the day, M. Claude Bernard, of Paris, in pointing out new facts and establishing new laws. Those lectures have not for their mere object, to make the audience acquainted with the present state of physiology and other natural sciences, but particularly to show how we shall proceed in enlarging the narrow boundaries of this branch by well instituted and philosophical experiments. Another great advantage of this small volume is, that M. Bernard's lectures are presented by the editor, not only in a very correct, but also in an attractive form. As we have attended many of the same lectures, delivered by M. Claude Bernard in the winter of 1853–4, we are able to give the editor due credit for his exactitude. The same must be said of M. Ch. Robin's remarks, added in the appendix, and we say so with the more pleasure as the happy hours and days which we spent with Dr. Atlee in the company of M. Ch. Robin, behind the microscope, will be everlasting in our memory. We should like very much to analyze some of the chapters; but to do this, would oblige us to trespass the limits assigned us; consequently, we confine ourselves to the indication of some highly interesting experiments—concerning the functions of the sympathetic nerve, and the mutual influence of the blood and the nerve—which will be found in the valuable little work before us. H.

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PART III.

RECORD OF MEDICAL SCIENCE.

On the Use of Nitric Acid in Hemorrhoids. By HENRY SMITH, F. R. C. S.—Several years have now elapsed since the attention of surgeons was directed by Dr. Houston to the improved treatment of certain forms of piles by the application of nitric acid, and since the introduction of this plan, it has doubtless been employed by many in the profession; but it seems to be necessary even now to direct further attention to this matter. Most of us may be acquainted with the fact of a certain improved mode of treatment, or a certain remedy having been recommended and brought into the category of surgical means and appliances; but this may be all; for many of us either have no faith in it, or are too much wedded to the use of those other methods which have been adopted by our teachers and by the previous generations of sugeons.

These remarks may, I believe, be truly applied to the subject under present notice. The great advantages of nitric acid in the treatment of some forms of hœmorrhoidal tumors are not yet sufficiently known and acknowledged; and, having had numerous opportunities of observing them, I deem it right to give the results of some of this experience, and to make some observations thereon.

In many cases of hemorrhoids, the distress caused by them, perhaps for years, has been such, that many patients are induced to undergo operations of considerable severity for the purpose of getting cured. Ligature of the offending part and excision have been the measures to which surgeons have for the most part resorted.

When the hemorrhoids are situated within the sphincter ani, excision is a dangerous remedy. It is true that in many cases the scissors may be used without much bleeding, and a good cure will result; but every now and then such extensive hæmorrhage will follow as to place the life of the patient in jeopardy. I have myself been called to two such instances. In the one case of a young gentleman, some internal piles had been cut off by another surgeon. Three hours after the operation I was called to the patient, and found that he had bled enormously; in truth, his life had been seriously periled.

In the second case, the patient was a middle aged female, on whom I had performed a somewhat complicated operation

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for the relief of a prolapsed rectum, conjoined with excessively painful piles. I snipped off the most prominent part of the swelling which was protruding externally, and after having returned the parts within the sphincter, and perceiving no bleeding, left the patient, but in about a quarter of an hour she suddenly had an inclination to stool, and passed an immense quantity of blood. This occurred two or three times, and when I saw her she was in a very exhausted and restless state; but I managed to stop the bleeding, and she happily recovered. In this instance I doubtless used the scissors more freely than was proper.

It may be stated as a rule, with but few exceptions, that the scissors or knife should be limited to those excrescences, vascular or otherwise, which are situated external to the sphincter; where there is a prominent swelling, with a more or less narrow neck growing from the verge of the anus; where there is simply an enlarged and distended vein containing a coagulum of blood; and especially where, with a relaxed and hæmorrhoidal condition of the rectum, there is a redundancy of loose skin around the anus—in such latter case the propriety of using the scissors is very obvious.

Ligature of internal piles or of portions of a relaxed state of the rectum is an operation which is chiefly in favor among surgeons, and its use is attended with most signal benefit; and, if it were invariably adopted without producing dangerous or fatal symptoms, it would not be expedient to discard the employment of such a remedy; for, in general, but one operation is required, and, if this be properly effected, the benefit will be speedy and lasting; but the advantages of the ligature are, to a certain extent, counterbalanced by certain evil results which are likely to follow its use. In the first place, the patient must be confined to his bed or sofa for some days. Secondly, the application of the ligature is sometimes followed by the most intense pain. Thirdly, symptoms of an alarming and dangerous character may be produced; and, fourthly, death itself may, and does occasionally follow its use.

I have had no personal experience of a fatal event after the use of the ligature; but I know of one instance in the practice of a friend where death did ensue after an operation, and, during a recent discussion at the London Medical Society, Mr. Henry Lee, who has paid much attention to this subject, stated that he had examined two individuals where death had been produced by the ligature. In one instance of a gentleman—a most valuable life—who had had a ligature applied for the cure of a bad prolapsus, most alarming peritoneal symptoms came on, so that I was obliged to watch him most carefully for some time after the operation; and in others I

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have seen very severe pain and distress produced,—retention of urine is by no means an uncommon sequela.

Under these circumstances it is desirable to employ an agent which may effect the same good purpose without the attendant evil results; and, in many instances, this may obtain in the use of nitric acid. It would be absurd to attempt to discard the use of the ligature in all; for, where there is considerable prolapsus of the rectum, or where the hæmorrhoidal tumors are large and have extensive bases, it will be necessary to resort to the use of the ligature; but, in a great majority of instances of internal piles and of prolapsed condition of the rectum dependent upon the unhealthy and vascular state of the mucous membrane, nitric acid will be found to effect a cure; and this, too, without causing any of those painful and distressing symptoms which occasionally follow the use of the ligature. It has occurred to me to have many opportunities of employing it, and I have seen most excellent results from it. I will briefly relate a few of the most striking cases.

In May last, I was requested to see Mr. F., a gentleman who had just returned from Australia, in company with his medical attendant, who told me that he had suffered for several years with distressing protrusion of the rectum after going to stool, and that he was most anxious to get cured, and would undergo any operation.

On examination, I discovered that there was a highly congested and relaxed state of the whole mucous membrane of the rectum, and just within the sphincter a vascular broad mass, which might or might not have been termed a pile. However, the pain after going to stool was always most excessive as the mucous membrane prolapsed. In addition, there was an external hæmorrhoidal excrescence attached to the verge of the anus. I consulted with the surgeon in attendance, who had not even heard of the use of nitric acid before he came to England, and it was determined to apply it freely to the whole congested and relaxed portions of the rectum.

The patient was very anxious that only one operation should be done; therefore the very strongest acid was applied with freedom, and the external pile was cut off.

It was not necessary to apply it again. Great pain was produced by the acid, lasting some time, but when his bowels were first moved after the operation there was not any prolapsus, and in a few days he had lost all trace of a complaint which had for years embittered his life.

While this patient was under my care, Mr. T., a gentleman aged sixty-five, consulted me about his piles. He had suffered for more than twenty years, and had consulted various prac-

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titioners, and had used a quantity of remedies. The last person he consulted was an homœopath, who took the fees of the old man with an unsparing hand, but did not even condescend to examine the rectum. He stated that his sufferings had been great for the last twenty years; that the gut came down when he went to stool, which process lasted an indefinite period of time, in consequence of his being compelled to return the protruded part, which at times he assured me had sometimes filled the hollow of his hand. In addition to this, the gut generally prolapsed when he went out for a walk, and at times the hemorrhage had been such, that, after leaving his house for a walk, he had been compelled to return hastily to change his drawers.

On examination, I found a collection of very vascular and strawberry-colored piles within the sphincter, and a protrusion of the mucous membrane of the rectum. Around the anus was a large quantity of relaxed and thickened integument. It was just the case which was adapted for the treatment by nitric acid, the action of which I explained to the patient, who readily consented to its use.

On the following day, his bowels having been cleared out, and the mucous membrane being protruded as much as possible by the use of warm vapor, I applied nitric acid lightly to the largest pile. The effect of this was only to give pain for a few moments, and, after a few days, there was decided relief, when the acid was repeated to others of the tumors. The same treatment was carried on until I had applied it on five different occasions, when with scarcely giving the patient any amount of pain, all the excrescences were nearly destroyed. The loose and redundant skin around the anus was then removed, and in a few days the patient came to me full of gratitude, stating that he had no further trouble, and that he had not been in such comfort for twenty years.

In the first of these cases the cure was more rapid and decided than I could have expected, as it was not one for which the nitric acid treatment is so well adapted, the disease consisting mainly of a highly congested state of the veins of the rectum, the hæmorrhoidal tumor itself being of a deep blue color. It is in the instances like the second, where the tumors are defined, very vascular, and of a bright red color resembling a strawberry, that the nitric acid is so particularly useful.

But it is in cases where there is a great deal of bleeding that it acts so well; in the second there had been most copious hemorrhage, from time to time, but this had been checked before the patient consulted me, and therefore it would not be fair to give the acid the credit of curing this as well as other symptoms, because it did not exist at that precise period of

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time; but cases have occurred to me in which I have seen remarkable effects produced as regards arrest of bleeding. The last case treated by me was an instance of this. It occurred only a few weeks ago, in the person of an elderly woman, who came to me complaining of profuse bleeding from the rectum, which had been going on for several days. Her countenance betokened loss of blood. On examination, I discovered, just within the sphincter, a large, vascular, bright red pile. I touched it lightly with nitric acid; this had the effect of restraining the hemorrhage, and after three other applications she was cured.

If the remedy is thoroughly applied, and the accessory treatment properly pursued, the cure will be lasting, a striking instance of which was presented to my notice a few weeks ago, in the person of an officer in the Navy, who was under my care in 1850 for the treatment of very bad piles, from which he had suffered greatly many years, he having been employed on active service in a hot climate. Here there were several piles internally, and a large redundancy of loose skin externally. Nitric acid was applied three or four times to the former, and the loose skin was cut away; a good cure resulted. I saw this gentleman the other day on his return from active service abroad, and he tells me he is quite well.

In many instances of long standing hemorrhoids, the external skin becomes so thickened and relaxed that there will be a necessity of snipping it all away if a perfect cure be expected. The contraction which takes place subsequently to the operation braces up the parts and prevents any further protrusion of the gut which might subsequently take place.

The acid should be quite pure, and should be applied by means of a stick of wood. The parts should be well oiled afterwards. It is very important to attend to one thing, namely, to wipe the part to which the acid is to be applied carefully with a piece of lint, in order to get rid of the mucus which covers the piles, and which will prevent the proper action of the acid.—*London Lancet.—Western Journal.*

Belladonna in Salivation.—A woman treated by mercury, internally and externally, for serous diarrhœa, was affected with profuse salivation. Dr. Erpenbeck treated this latter complaint with belladonna in divided doses, of two grains and a half, taken in emulsion every twenty-four hours. Next day the salivation had subsided, and the mouth was quite dry. On stopping the belladonna, the salivation returned, and again ceased when it was resumed.—*Western Med. Journal.*

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A Sketch of the Present Condition and Treatment of some of the Diseases of the Urinary Organs. By WILLIAM ACTON, Esq.—*Gonorrhœa.*

During the last few years, M. Ricord has been gradually relinguishing the employment of caustic injections in the treatment of this complaint. He still thinks that in many cases this is the treatment attended with the most certain success; but every now and then instances occur in which the pain is very severe, the inflammation runs high, and then, instead of a cure being obtained, the disease relapses into a chronic state, which resists all our means of cure; in addition to this, the patient requires a great deal of watching, more than a surgeon in full practice is able to devote to each individual; so that, as I mentioned above, Ricord now employs caustic injections ve y rarely, and prefers prescribing capsules, and the following injection: Sulphate of zinc, acetate of lead, of each fifteen grains; tincture of catechu, one drachm; Sydenham's laudanum, one drachm; rose water, six ounces and a half. My own practice in London fully bears out this experience, and it is only in old rebellious cases of gleet, in spermatorrhœa, and in chronic affections of the bladder, that I now employ nitrate of silver injections; but in these cases the judicious employment of caustic is of the greatest value, and will at once effect a cure, when all other means fail; still even in these cases, the remedy must be employed with care, otherwise, ill consequences will arise.

In the subacute stages of gonorrhœa, when there is no scalding, but a good deal of a discharge, I have found the solution of lead answer best in London, together with copaiba capsules, not taken in large numbers but at repeated intervals, so as to charge the urine constantly with the essential oil; but I still (as in the last edition of my book) continue to insist that gonorrhœa will rarely be rapidly cured, unless the surgeon takes the precaution to show a patient how to use his syringe, and see that the instrument be properly made. Having insisted elsewhere in great length on these points, I do not think it necessary here to revert to them; but to these petty matters I attribute much of my success, and not to any specific treatment. It is, however, worthy of note, that the time of year and damp weather have a great influence in retarding a cure.

Gleet.—Since the publication of my last edition I have experimented largely with counter irritation, and I think my success deserves a few moment's consideration. I am in the habit of recommending my patients to paint the under surface of the urethra with tincture of iodine every night, as well

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as applying the liquid to the perinæum, so as to produce a slight peeling off of the skin. The remedy is then to be left off, and repeated when the skin has regained its cuticle. In the more chronic cases I employ a solution of cantharides dissolved in chloroform, with which I paint the skin well in the situation mentioned above. The chloroform evaporates, leaving the cantharidine *in situ*. But as I intend shortly publishing a paper on this subject, I shall not further allude to it here.

Swelled Testicle.—Compression of the testis, by means of strapping, has now been nearly given up by M. Ricord, in his hospital; it is, he still admits, an excellent remedy when well applied, but a patient should be seen, in the early stages, twice a day, and the strapping re-applied if necessary. Without watching, this treatment is sometimes accompanied with disagreeable consequences, which aggravate the complaint, at least the French professors think so; but in London, in private practice, I have every reason to be satisfied with the treatment, which shortens the duration of the disease very much, and dispenses with the usual inconveniences attending these cases. M. Ricord places his principal dependence on leeches, mercurial ointment, and plaster; and, above all, purgatives taken every morning, consisting of aperient salts. In this last recommendation I can bear testimony most fully.

Varicocele.—M. Ricord showed me several cases of varicocele, treated by his instruments, in the progress of cure, and stated, that he never but once had an accident with them, and that arose from his pulling away the ligature too soon, hemorrhage came on, and, in cutting into the tumor, he found that the silk had failed to divide a small portion of the inclosed parts, and hemorrhage took place from an *arteriole*. He added, he has no occasion to publish any ill consequences, they will be known, if they occur, soon enough.

On the question of return of the complaint, he says, he has seen relapses in the practice of others, not in his own. When all the vessels are divided, the complaint cannot return at once, but it may in some cases. In what operation does not this occur? Are we, on such grounds to defer all operations?

Impotence he has never noticed as a result; on the contrary, the testicle suffers no longer from the stagnation of its blood vessels, when relieved of the pressure by the operation.

In private practice we are rarely called upon to resort to this operation. Patients generally apply to us early, and then palliative remedies suffice; and in the more advanced stages I do not usually recommend recourse to ligature of the veins, as the patient often would refuse; and experience shows that support of the scrotum, by means of a bandage, strapping the testis, and the constant wearing a varicocele ring, suffices to relieve the most urgent symptoms.—*Charleston Journal.*

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A New Broth for the Sick. By Prof. Justus Lieber. (From the Dublin Med. Press.)—To prepare this broth, half a pound of the flesh of a recently killed animal, (beef, or the flesh of a fowl,) is chopped fine, and well mixed with a pound and an eighth of distilled water, to which four drops of pure muriatic acid, and from half to a drachm of common salt, have been added. After an hour, the whole is thrown on a common hair seive, and the fluid is allowed to run off without pressure. The first portion, which is turbid, is poured back, until the fluid runs off clear. On to the fleshy residue in the seive half a pound of distilled water is thrown in small portions. In this way a pound of fluid (cold extract of meat) is obtained, of a red color, and an agreeable taste of broth. The sick are allowed to drink a cupful, cold, at pleasure. It must not be heated, as it then becomes turbid, and deposits a thick coagulum of animal albumen and hematine.

The sickness of a young female servant, from typhus, in my house, gave occasion to this preparation. It was called forth by a remark of my medical attendant, that, in certain conditions of this disease, the greatest difficulty, which presented itself to the physician, lies in an imperfect digestion—a consequence of the condition of the intestines, and the difficulty of obtaining food suitable for digestion and the formation of blood. Generally, broth, prepared by boiling, is deficient in all those ingredients of meat which are necessary for the formation of the albumen of the blood, and the yolk of an egg, which is added, is very poor in this substance, as it contains, on the whole, 82½ per cent. of water, and 17½ per cent. of egg-albumen, or a substance analagous to it, and whether this substance, in its nutritive qualities, is equal to the albumen of flesh, is, according to the investigations of Magendie, at least, doubtful. Besides the flesh albumen, the new broth contains a certain quantity of hematine, and, therein, a large quantity of iron necessary for formation of blood corpuscles, and, lastly, the muriatic acid for digestion. A great hindrance to the employment of this broth, in summer, is its changeableness in hot weather. It undergoes fermentation, as sugar with yeast, without giving a disagreeable odor. What substance causes this change it is very desirable to ascertain. On that account, the flesh must be treated with very cold water in a cool place. Ice-water and cooling with ice removes this difficulty. But, above all things, care must be observed that the flesh is used fresh, and not several days old. In the hospitals of Munich, and in private practice, this broth has been employed with great advantage.—[*Annalen der Chemie and Annals of Pharmacy.—Ibid.*

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Use of the Microscope in the Diagnosis of Cancer.—In a recent number of the *Gazette des Hopitaux*, we find the following sensible view taken of the use of the microscope in cancerous diagnosis.

What are the microscopic characters which have been assigned to cancer? Without entering into the details of microscopic anatomy, we shall content ourselves with indicating the principal results that have been received. A cancerous cell or globule is found, enclosing cellular contents, and one or more nuclei, in which nucleoli are found; but the form of this cancerous globule is far from being constant; being rounded, oval, spherical, often irregular and presenting prolongations, which have been designated under the name of horus, and which themselves enclose numerous nuclei of cancerous globules. Sometimes, even, the cancerous cell is wanting, and there are only nuclei enclosing nucleoli: such is the nucleolated cancer. Such are the characters which have been assigned to tumors designated under the names of scirrhus and encephaloid. But are these the only cancers? No; for there are other tumors, which, like the two last, have the melancholy privilege of recurring, either on the spot, or in the entire economy: such are the tumors which have been designated under the names of fibro-plastics, of cancroids, and of epithelial tumors. These are not true cancers, for elements of another nature have been found in them. In the fibro-plastic tumor are found fusiform globules, lengthened at their extremities, and terminating in true fibres. In epithelial tumors are found cells of which the structure is similar to that of the epidermis or of the epithelium of mucous membrane. Besides these, there are the enchondroma and the melanotic tumors, which also often re-appear with great rapidity, and in which are found elements differing from those just mentioned. Here, then, we have a certain number of tumors, which have all one of the most important clinical characters of cancer, that is to say, which recur, and in which, nevertheless, we do not find the true elements of cancer, that is to say, the cancer cells.

The principal objections, therefore, made to the microscope are, that in the cancer are found cells extremely variable in form, and not always presenting a character of identity; that homœomorphic characters are found in other tumors; and that these tumors sometimes re-appear with as much rapidity and as fatally as true cancer. To these objections the microscopists reply by observing, that no matter what may be the anatomical element of tumors, they have, when they re-appear, their primitive characters; and although some exceptions seem

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to contradict this theory, we are of opinion that the microscope has been eminently useful in enabling us to make a more accurate anatomical description of such tumors than would have been otherwise possible. In fact, it has indicated their place in nosological classification. But, it may be asked if clinical observation justifies the classification of tumors, as made by the microscope? Yes, in a great number of cases. In fact, every surgeon has had opportunities of verifying that the march of cancroids is very different from that of scirrhus and encephaloid cancers. True, it matters not which of these tumors it is, the patient always ends by succumbing; but it is to be remarked, that the march of the disease is far from being the same. Of course, there are points of identity, since these diseases were for a long time confounded. The same remark may be made of fibro-plastic tumors, which re-appear on the same spot or in some other part of the economy, but which often present symptoms of a peculiar character.

Another much more serious objection which has been made to the micrographic examination of epithelial and fibro-plastic tumors, is, that they are composed of elements which exist as well in the economy. Thus, in the indurated chancre, and in the tissues indurated by inflammation, are found fibro-plastic elements, and yet these latter affections have a march which is entirely their own. They do not recur. In warts and syphilitic vegetations, epithelial cells are met with. True, warts recur, as do also vegetations, but this is the one point of contact they have with cancroids; for what can be more dissimilar than those benignant alterations and an affection which almost always kills? And it is impossible for the microscope to indicate which of these fibro-plastic and epithelial affections are susceptible of affecting the economy.

We think, therefore, that instead of merely describing cancerous tumors characterized by a cell of a particular form, there is room for admitting many species of cancer—the fibro-plastic cancer, the epithelial cancer, the encephaloid cancer, the scirrhus cancer, and the melanotic cancer. Each of these species of the same genus would have a generic character, that is to say, its re-appearance, and would have, for specific character, the anatomical element established by the microscope. Possibly, the microscope may discover a generic character in the different tumors first enumerated, but it is certainly not the cancerous cell which should be taken as the point of departure; since it does not exist in a certain number of tumors, which are very properly designated under the name of cancer.

Other objections, which have been made to microscopic observations, appear to us of no great force. Thus, it has happened, that where one micrograph has established the existence

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of the cancerous cell, another has not found it. But it may be remarked, that one or more errors on the part of an observer, should not be imputed to the method itself; there are so many causes of error in an instrument requiring such delicate management, that a slight turn of the screw is sufficient to change the whole aspect of the tissues. Besides, in doubtful cases, how often do we see two practitioners of equal skill differ in their diagnosis? In such cases, one at least must be wrong, and yet the science of the other may justly remain indisputable.

In the actual state of things, we cannot accept all that the microscope asserts; but we must say, that it has already rendered great services, and we do not doubt, that it will continue to do so. It is open to the reproach of having advanced too far, and of having too readily disregarded clinical observation, although it was there it found the facts which it has used to establish its doctrines. We must add, however, that more recently the attentive examination of facts has enabled it to adopt conclusions more in harmony with the actual development of disease.—*American Med. Monthly.*

The Influence of Fear in Producing Functional Derangements.

By JOHN B. COWAN, M. D.

The powerful influence exercised by mental emotions on the condition of the human frame has long been recognized. Under their influence the flow of saliva may be checked, that of urine may be increased, tears may be produced in inordinate quantities, diarrhœa, or copious perspiration, may be brought on. But although these facts have been clearly ascertained, it is difficult, if not impossible, to trace the definite connexion betwixt the physical organization and the mental manifestations, in virtue of which these effects follow.

The prevalence of a fatal and wide-spread epidemic affords, however, an admirable opportunity of observing the influence of one mental emotion—FEAR—in producing, or assisting to produce, certain morbid states of the system. Many writers, both on metaphysics and on medicine, have alluded to the symptoms of bodily and mental derangement caused by fear.

Burton, in his "Anatomy of Melancholy," says—"Many lamentable effects this fear causeth in man, as to be red, pale, tremble, sweat; it makes sudden cold and heat to come over the body, palpitation of the heart, syncope, &c. It causeth oftentimes sudden madness, and almost all manner of diseases." And again, after narrating the effects of terror which followed

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the massacre at Lyons in 1572, he adduces the instance of "Themison, the physician, who fell into an hydrophobia by seeing one sick of that disease." In another part of his work he makes the following very apposite observation:—"Men, if they see but another man tremble, giddy, or sick of some fearful disease, their apprehension and fear is so strong in this kind, that they will have the same disease;" and, quoting from Dr. Cotta, narrates two stories, "the one of a parson's wife in Northamptonshire, anno 1607, that, coming to a physician, and told by him that she was troubled with the sciatica, as he conjectured (a disease she was free from), the same night, after her return, upon his words, fell into a grievous fit of a sciatica; and such another example he hath of another good wife that was so troubled with the cramp; after the same manner she came by it, because her physician did but name it." These, however, are rather instances of the force of imagination acting upon weak minds, than of disease caused by fear.

Dr. Darwin in his great work on the "Laws of Organic Life," treats of the diseases of association, under which he classes those produced by fear. His theories on this, as on other points, deserve attentive consideration, as the results of the studies of an acute observer and original thinker. He accounts for the increased flow of pale urine in hysteric diseases, by supposing that "the motions of the absorbent vessels of the neck of the bladder become inverted by their consent with those of the skin, which are become torpid by their reverse sympathy with the painful ideas of fear." The same effect may follow from anxiety, where there is little fear; as an instance of which, the frequency with which young men about to be examined for a degree pass urine is cited. His theory of *Diarrhœa a timore* may be quoted entire:—"The absorbent vessels of the intestines invert their motions by direct consent with the skin; hence, many liquid stools, as well as much pale urine, are liable to accompany continued fear, along with coldness of the skin. The immediate cause of this is the decreased sensorial power of association, which intervenes between the actions of the absorbents of the cold skin, and those of the intestinal absorbents; the motions of the latter become on that account weakened, and at length retrograde. The remote cause is the torpor of the vessels of the skin, catenated (in plain English linked) with the pain of fear. The capillaries of the skin consent more generally by direct sympathy with those of the lower intestines and of the bladder; but by reverse sympathy more generally with those of the stomach and upper intestines. As appears in fevers, where the hot skin accompanies indigestion of the stomach; and in diarrhœas

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attended with cold extremities. The remote cause is the torpor of the skin, owing to its reverse sympathy with the painful sensual motions, or ideas, of fear; which are now actuated with great energy, so as to deprive the second link of associated motions of their due share of sensorial power. It is also probable, that the pain of fear itself may contribute to exhaust the sensorial power, even when it produces no muscular action."

Dr. Holland, in his "Medical Notes and Reflections," devotes a chapter to the effects of mental attention or bodily organs. He shows that direct effects follow from consciousness being, by a distinct voluntary effort, directed towards organs or parts of the body. Of the force of this statement every one must be easily convinced. Among other instances, the state and action of the bowels is alluded to as thus influenced. The attention being concentrated on them, sensations previously unnoticed are experienced, and their action excited and quickened. But this, after all, amounts to a species of fear. If not actually commencing, as it is most likely to do, from apprehension or dread, caused perhaps by some reference to that part of the system, the consciousness, unless kept concentrated by fear, is not likely to continue long directed towards it; or the consciousness will degenerate into fear. Feuchtersleben, in his work, "Medical Psychology," says:—"Fear causes especially enuresis, diarrhœa, seminal discharges, erysipelas, and eruptions about the lips; facilitates the reception of contagion and miasma, disturbs crises, and aggravates every disorder." After enumerating instances of actual organic lesions produced by the evidence of this emotion, and instancing its well-known effect in causing jaundice, he adds: "Here we ought to go further, and pass on to the psychical causes which act on the nervous principle; but the quality of these by no means explains their mode of action. Fear and horror act, moreover, variously, either exciting or paralyzing, according to the greatness of the danger, and according to the individuality of the persons affected by them."

There cannot be the slightest doubt that the presence of Asiatic cholera causes in a community, and in individuals, a dread and a terror, which is not exhibited by any thing like the same extent during the prevalence of other epidemics scarcely less fatal. The reasons why cholera should excite such powerful emotions are sufficiently obvious. As yet it may be regarded, in this country at least, as a disease of comparatively modern origin. Its exciting abuses appear as inscrutable, as its removal seems beyond the reach of sanitary measures, or the best applied efforts of medical art. Its very suddenness is appalling, so that we have all the elements to

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keep alive and foster fear. Fear seems to produce, during an epidemic of cholera, no well-marked effects upon those who are under its influence. The one of these, as might be anticipated, is a species of hysteria, so characteristic that it might be designated by the terms choleraic hysteria; the other is actual diarrhœa or vomiting.

The hysterical symptoms are most frequently met with in females, but the writer has seen one case in the male which appears to him interesting. On the 26th of December last year, shortly after cholera made its appearance in Glasgow, he was called late at night to see a young man of moderately robust make, and whose employment was that of a groom. His habits were remarkably temperate, and in every respect he was a steady and good servant. He was found walking up and down his room in a very excited state, occasionally applying his hands to his abdomen, and seemingly disposed to vomit. On inquiry, it was ascertained that he had no symptoms of diarrhœa or vomiting, but he declared that he felt, that if he lay down in bed he would immediately purge and be sick. Persuasion was utterly useless, and so was abuse or ridicule. His master lent assistance to strip him by force; he was compelled to lie in bed, and a strong opiate was administered, under the effects of which he was soon in a profound sleep. He awoke quite well on the following morning, but still laboring under mental agitation, and declared that he had felt convinced the previous night he was dying of cholera. This man seems afterwards to have quite overcome his fear as regards cholera, having watched for a considerable time by the death-bed of a fellow-servant who had been attacked by that disease.

The following instance was related to me by a medical friend:—One evening lately I visited two young ladies, between twenty and thirty years of age, in whose house a relative had died of cholera the previous week. Since then they had been affected with the most overpowering fear of the disease; they would not eat for fear of inducing vomiting, and felt persuaded that they were both about to take cholera. They felt sick, and had an uneasy sensation over the epigastrium, and though neither of them had previously had any hysterical or nervous affectations, they now frequently fainted, felt alternately hot and cold, and had occasional shiverings. They refused to lie down for fear they should become sick, and scarcely slept at all at night. They had taken no nourishment for four days, except little bits of buiscuit, and a mouthful of cold water with some aromatic substance in it, and they could hardly be persuaded to swallow a little wine and water. They had not vomited at all, and they had resisted the incli-

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nation, and succeeded in preventing any passage from their bowels for six days, under the delusion that it was the safest way to prevent diarrhœa. They were constantly moving about to assure themselves that they were still unattacked, and as night drew on they felt perfectly miserable at the thought of requiring to retire to bed. Altogether, I never witnessed such a lamentable example of the effects of fear. I persuaded them to take some tea and toast, a little negus on going to bed, and ordered a laxative pill to both, assuring them that the nourishment would strengthen them, and that they might expect to be better in the morning. They slept pretty well, and in the morning felt more composed, principally I presume from the assurance I had given them that they would be better. The pills operated mildly, and had the effect of relieving some of the uneasy sensations. They still disliked the idea of taking solid food, but gave in when I insisted on their doing so, as well as taking some wine several times. Having once overcome the fear of taking food, they soon regained their strength.

Dr. Steven has detailed to me a more interesting case, that of a man whose dread of thunder was such, that during a thunder-storm he had invariably an attack of diarrhœa. During the epidemic of cholera in 1849, this person resided in Hamilton, and when the disease appeared in that town he kept himself closely secluded in his house, never venturing out. Towards the close of the epidemic, on a day during which he had heard there had been no fresh case of cholera, he went out, and Dr. Steven had some conversation with him. He was attacked by cholera, and died on the following morning; and his was the last fatal case but one which occurred. It seems apparent that this man felt himself secure so long as he lived secluded, and probably it was to that feeling of security being destroyed, and agitation perhaps induced by conversing on what to him was an all-absorbing topic, that the seizure was in some degree to be attributed. Similar examples might be multiplied, but those narrated are sufficient to indicate the character of a class of cases which all medical men will recognize as having been of frequent occurrence during the last few months.

To such an extent has the fear of cholera existed, that it has led to the commission or omission of acts discreditable in the highest degree to those concerned. We learn from the public press that one unfortunate man was left to die on a public quay; and this is by no means a singular case of desertion of duty. Husbands have been known to desert their wives, parents their children, and children their parents; while the relatives of those who die of the complaint, hasten

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to bury them within a few hours of their decease. No wonder that the disease should spread in every locality while such a panic continues to prevail.

A fear of the existence of the disease has often been produced by the too indiscriminate employment of opium and other astringent medicines. A loose evacuation called for brandy and laudanum. These were taken, the stomach became deranged, vomiting perhaps occurred, and even cramps, real or imaginary. The medical practitioner was hurriedly summoned to a case of cholera, and from the excitement and vague statements of the patient and attendants, would find it extremely difficult to discover the real state of matters. Or, again, a person has been constipated for some days, takes before retiring to rest some laxative medicines, which, beginning to operate, causes alarm. Opium is resorted to, and the antagonistic action set up soon produces general disorder of the system, increased by mental perturbation not easily allayed.

Although, however, fear undoubtedly produces such derangements as those briefly touched upon, as well as others to which no allusion has been made, it is obviously impossible to trace either its direct influence or to assign to its due share in causing these effects. But believing, as all practitioners must do, that the violence of this mental emotion predisposes to, if it does not actually directly produce cholera, it is a point, we apprehend, well worthy of consideration, whether no means exist by which it can to some extent be controlled. Every effort should undoubtedly be tried to put an end to cholera being made a constant theme of conversation during its prevalence, and to discourage the practice which has become so common, and is so fraught with injury and danger, of making the public press the vehicle for discussing its various phases and modes of treatment.

Any one who has glanced at the *Times* newspaper, for many months passed, must have been struck with the innumerable infallible modes of curing cholera which have been promulgated through its columns, equally unworthy of regard, whether emanating from "eastern travelers" or "hospital physicians." The last and most notable instance of this was the publicity given to a plan of treatment by no means new, which it was stated had been adopted with success in some dozen cases, and which received the approving fiat of the great organ of public opinion.

But while some slight degree of good may result from attempting to check the tendency of the public mind to dwell upon such an alarming subject, the true source of all this pusillanimous dread lies much deeper, and cannot, we fear, be reached. It is the result of an educational system conducted

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upon erroneous principles, and the errors and defects of which, more especially as regards the female sex, have frequently been pointed out, and by none more forcibly than by Barlow, who has in a very striking manner shown the fruits of misdirected early training in producing insanity. To the same identical causes—the want of self-control, of moral courage, and, in the case of females of the higher classes, of interesting occupation and active exercise of the mental powers—may be traced the existence and frequency of a fear during epidemics, which is demoralizing in its effect upon a community, and is actually fraught with danger not only to those who indulge in or foster it, but to the public at large, by its undoubted tendency to increase the prevalence and fatality of the epidemic. It is earnestly to be hoped that any future outbreak of cholera may be distinguished by the entire absence of such cases as those shortly related, and may not be aggravated by the violence of such a depressing mental emotion as fear.

[*Glasgow Journal.—Ibid.*

Aphorisms of Hippocrates.

"Vita brevis, ars longa, occasio præceps, experientia fallax, judicium difficile."
Life is short, art long, occasion brief, experience fallacious, judgment difficult.

Such is the language of Hippocrates, the Father of Medicine, in his Aphorism, No. 1. Uttered nearly four hundred years before the Christian Era, it comes down to us, not only clothed with the authority of a great name, but, what is still more, containing truths that are as imperishable as the author's name in the commonwealth of medical science. Each sentence in the Aphorism embodies enough of truth for a volume. We have no time to even comment upon any of them, much less all. The last, "*Judgment is difficult*," we shall, however, take to serve as the basis for one or two remarks.

In the practice of medicine nothing is perhaps more frequently or more painfully realized than the truth of the remark, "Judgment is difficult." A body composed of some twenty or more *inorganic* elements, and some ten or twelve *organic*, arranged together in the forms of cells of the most delicate structure, tissues of the most complicated character, and organs of greatly diversified functions, all of which being under the influence of, and subject to, the play of the forces known as those of gravitation, cohesion, chemical attraction, and these again modified and controlled by that mysterious one known as the "*force of vitality*," must give rise, whether in health or disease, to phenomena that, to the individual whose mission it is

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to repair, make "judgment difficult." Into this complicated mass of matter, often, an invisible, intangible, imponderable, inappreciable agent is introduced, which disturbs the harmonious and delicate relations, to the presence of which we apply the term *health*. What now more difficult than to understand a derangement in matter thus complicated? If our vocation was merely that of an artist, it might do when something gets wrong to say, with the mechanic, that a "screw is somewhere loose," or "that a wedge has dropped out of its place." This, however, might not answer the purpose, even taken in a figurative sense. One of the little cells floating in the life-current has likely come to a place where it has been accustomed to pass, and has been denied admittance—has had to tarry, to lay over for a few days; or perhaps it has met the insidious enemy at a point where it was unexpected, and been robbed of some of its organic or inorganic elements. Again, perhaps there has been "*a solution of continuity*" in some of the fibres of the tissues in the deep-seated parts of the body. Or, perhaps the foreign agent has come in contact with an organ, imparting to it unnatural activity, or what is just as likely, it has disarmed the organ of the ability to act at all. Now how is all this—and this is but a meagre specimen—to be ciphered out? Certainly, in attempting it we are reminded of the distinguished personage to whom we have alluded—"Judgment is difficult."

Because we are unable always to be perfect in making out the exact character of the derangement, and, as a consequence, are unable to apply the proper remedy, we are upbraided often with the exclamation: "Oh, the glorious uncertainty of medical science!" "Doctors can do nothing more than divert the attention of the patient, while nature cures the disease," etc., etc. But few stop to think of the difficulties we have to encounter in many cases, and the impenetrable mysteries that surround others. Our profession is to attempt the cure; and although we may succeed ninety and nine times in the one hundred, still a failure in the other case is often a sufficient cause of reproach! "Why not cure all?" is the unreasonable inquiry. It would not be a sufficient offset to such demands to say that the moralist cannot cure all disposed to be vicious and corrupt; or that the lawyer cannot gain all his cases in court; or that the mechanic cannot mend all the broken machines; or that the chemist cannot analyze all the substances supposed to be compound; or that the astronomer can not always predict the appearance of the comet; or that the geologist cannot come within a thousand years of the age of the world; or that the mathematician does not yet fully understand the capacity of the nine digits; or that the philolo-

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gist is in the infancy of his knowledge concerning the power of lettters; or that, in short, we are yet but upon the threshold of all science, imperfect in all our efforts, it matters little what is up for investigation—such replies, we repeat, would in no way extenuate, in the estimation of the many, our imagined imperfections. Such being the case, what course is left for us to pursue? Are we to sit down and pare our finger-nails, in order to kill time, mourning over the want in the public mind of qualities it ought to possess, or make renewed efforts to confer a greater degree of certainty on every thing connected with our vocation? Are we to sit down and abandon the interests of our profession to the results of chance, because preachers, lawyers, poets, etc., etc., are found mustering with the quacks and charlatans of the day? The profession, we think, would universally give to such inquiries a negative response. In looking over the record, we find that we have made progress in every age, and in none more than the present. The truth is, however, that we have in charge the most difficult science, or, rather, series of sciences, with which our race has had any thing to do; and this fact, if properly appreciated by the great mass of our profession, would work out salutary results. It would stimulate to increased exertion. There is scarcely an individual but what might double the amount of labor he is performing, to make himself and others acquainted with the fields yet unexplored. This applies eminently to the young men scattered over the country, many of whom are in regions that abound in facts, which, if carefully collected and arranged, would perhaps untie a knot that has bothered all the men in the profession from Hippocrates to the present day. Indeed, there is no locality where disease occurs, but what contains much that would be useful, if rightly observed and recorded. The chemists are at work in the laboratory, and they are making developments that give increased certainty to our science; the pathological anatomists are at their posts, examining the tracks of disease on the organism, and why should not medical men, engaged in the practical parts of the profession, be equally industrious in their observations? The departments of the last are Etiology and Therapeutics—subjects in much need of investigation. If, therefore, all would labor, the time may yet come when we would not feel so pungently the force and truth of the sentence, "judgment is difficult."

[*Ohio Med. and Surg. Jour.—Ibid.*

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On the Influence of Locality on Asthma.—By M. TROUSSEAU.—Trousseau, in a clinical lecture, relates the following remarkable case. A young man, twenty-eight years of age, a native of St. Omer, had repeated attacks of asthma when resident there. On his going to London they ceased: and during the two years of his residence in the city he had not the slightest return of his complaint. At the end of this time he returned to St. Omer, and after four days he had a return of his symptoms. Three months later he went to Paris to consult Trousseau, and here the asthma left him in a short time. In the finest season of the year he went to Versailles, and was immediately attacked by asthma. He returned to Paris, and for six months continued free. After this he was obliged to return to St. Omer, and was there again attacked so violently he appeared to be dying. By Trousseau's advice he was carried on a hand-barrow to the railway station and brought again to Paris, where his sufferings once more vanished.

[*Gazette des Hôpiteaux.—Ibid.*

Amputation of the Tongue.—MAISSONNEUVE recently removed the tongue for a cancerous affection. The patient was President of the Committee of Vaccination, and was accustomed to hold the small glass tubes, in which the matter was preserved, in his mouth. The sharp points of glass often wounded the tongue, and these punctures were followed by pimples; induration supervened, which he endeavored to remove by cauterizations. This aggravated the disease and led to deep ulceration; to this the actual cautery was applied, which only gave still greater activity to the affection. The tongue became enormously tumefied; speech was impossible, and only liquid diet could be used. Various remedies were employed without benefit, and amputation was finally decided upon. The operation is thus described by the operator:—

"The patient having been submitted to chloroform, I first incised, on the median line, the lower lip and the soft parts of the chin. Next, with a chain saw, I made the section of the lower jaw; the two branches of which being thus separated, I was enabled to grasp the tongue and draw it out. By a rapid dissection, the diseased organ was then separated from the healthy parts, as far as beyond its anterior half, and over an extent of one inch. The sublingual gland had also to be sacrificed. Ligatures were applied upon the important vessels, so as to prevent hemorrhage. After this operation, the branches of the jaw were brought together, and maintained

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in contact, by means of thread rolled round the incisor and canine teeth; the ligatures placed upon the vessels were directed under the chin, in the inferior angle of the chin; and the edges of the division were united by means of the twisted suture. Notwithstanding the extreme gravity of this operation, no accident resulted. The union of the external parts was effected by first intention; the enormous loss of substance was rapidly repaired; the bones became consolidated; and, what is remarkable, forty days after the operation, the patient had recovered his speech, and the faculty of seizing and masticating his food. On examination, the tumor was found to belong to the class of epithelial cancroids."— *N. Y. Med. Jour.*

Case of Hydrocephalus in which the Head was Tapped eight times.—Mr. Brown reports (*Assoc. Med. Jour.*) the case of a child, aged six months, suffering from chronic hydrocephalus, whose head was tapped eight times. At the first operation (August 6th) six ounces of serum were removed, and the head tightly strapped; condition much improved; 18th, head was as large as ever, six ounces removed; September 6th, head still larger, eleven ounces removed; 28th, twenty ounces; October 8th, eleven ounces; 18th, sixteen ounces; 25th, twelve ounces; Oct. 30th, abandoned tapping and inserted a seton of silk through the membranes of the brain, running it along the interior an inch before bringing it out; no immediate result followed, but large quantity of serum discharged. At the end of twenty-four hours there were vomiting, restlessness, and expression of pain; in thirty-six hours twitching of muscles were observed, with moaning and stupor. The seton was removed and the symptoms improved; the head was diminished in size, but soon began to enlarge; tapping was again performed, but the fluid quickly collected, and the case was abandoned to Nature. The head continued to enlarge, and the child died. On examination, a large wash-hand basin of serum was removed; the containing sac was formed by the brain, completely unfolded, and no thicker than the dura mater.—*N. Y. Med. Jour.*

Sulphuric Acid.—Dr. Fuller repeats the favorable opinion he formerly expressed of the utility of this remedy. One ounce of the dilute acid of the 'Pharmacopœa' is added to eleven ounces of water, and one ounce and a half are given every twenty or thirty minutes, according to the severity of the case. Six or eight doses altogether are given.

[*Med. Times and Gazette.*

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The following well-timed article, from a secular paper, is characterised by a far more enlightened spirit of liberality than is usually to be found in the public press. The remarks of the editor are as applicable to St. Louis as to New York, where, for the same reasons, we have found it necessary to increase our former rates of charges from one dollar to a range from one dollar and a half to three dollars per ordinary visit. As to the cash system, we are in favor of that also.—Eds.

The Fees of Physicians.—In this city, as in many other places, the physicians have been discoursing lately, on the propriety of revising their fee-bills. In several places they have increased their charges all around; for what their fathers charged one dollar they propose to charge two. Here, while there seems to be a general inclination to increase the rates of charge, there is much objection to binding themselves to a fixed tariff; and in the Academy of Medicine, the fee-bill has been put aside indefinitely. This course is not, however, by any means, an indication that they are satisfied with their old fees, or will decline to change for services in proper ratio to the increased cost of living. The laborer gets two dollars where formerly he got one. The lawyer charges ten for what his father was satisfied to ask five for. The penny-a-liner now wants two pence for his item, and the preacher has a call in another direction, if they offer no more in his parish than was deemed ample for his predecessor. Why should the doctor, who works harder than any of them, and cannot collect half his dues, suffer an exception to the rule of advances in payment?

But the dollar he charges now is only worth the half dollar his old partner charged. It gets only half as much flour, or half as much meat, and it takes twice as many of them to buy a coat as his old partner gave. Butchers will not make a deduction of fifty per cent. to physicians, nor will the grocer put his tea and coffee and smoked beef down at half price to the regular M. D. Seeing, then, for all his necessaries and his luxuries, he must pay twice as much as his father paid, he should receive twice as large a bonus for the sleepless nights and doleful days that his tarrying by the sick man's bed makes the still chamber cheerful.

But while the doctors are regulating their monetary matters, we would suggest one radical change. Let them forswear the credit system utterly, and make cash payments the rule. Other men do it, and do well by the policy. Your credit-giving merchants are always making men angry with their dunning letters. Your credit-giving grocers are the ones that are always in trouble about the bills they render, and whom you conclude

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are dishonest, because their account and your recollections cannot be made to agree. Giving credit in these small matters, is an old fogy custom, which deserves to be exploded before another New Year's Day. Then we never saw a sick man who did not believe his doctor cheap at any price; but when he gets well, his doctor is "a terrible fellow for a bill!" While the pain lasts, or as it first begins to abate, the dollar goes over to the good man who brought the assuaging draught as easy as for a drink or a dinner. But how it seems to be picked out from among the heart-strings when the pain is forgotten! "All that a man hath, will he give for his life" when he is in danger of losing it; but when he is well, he will palter and argue, and pinch a half eagle that is demanded as "its equivalent."

The people are ripe for the change. Not all of them, indeed! for there are men who are great patrons of the doctor, who always move out of the city before it is convenient to pay, and they would think it very small business to be paying for every call when it is made. But "paying subscribers" always want to know the paper's price before subscribing, and dying patients would die easier with only one call for their executors to settle for; or, if that is their fate, convalesce more rapidly with no debt of indefinite size ahead, to eclipse their bright prospects. "Pay as you go," sick man, and you'll appreciate your doctor better, and prevent half his unnecessary calls. Let the doctor demand pay as he goes, and he will strive the harder to make his services valuable, save himself a world of annoyance, double his annual income, and have the pleasure of knowing when he is conferring charity, and when working for hire.—*N. York Daily Times.*—(*N. Jersey Med. Journal.*

Proceedings of the New York Pathological Society.—October 11th. Dr. Clark presented two specimens, said to have been voided from the bladders of two females. They were very complete filiform animals, five or six inches in length, of a dark brown color, having a flattened body, with a head without enlargement, and simply the abrupt termination of the body. The tail is bifurcated, presenting an opening like a serpent's mouth, which the animal has the power of opening and closing at will. One of the specimens was recent, and yet alive, having been kept in water that had been occasionally changed for a month past. The only difference between the specimens consists in their size, one being twice as large as the other, though of the same length. Dr. C. mentioned a third specimen of this character that had been sent to him, and which was said to have been coughed up. He considered wa-

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ter to be the natural element of these animals, and that they were accidentally present in the vessel into which the urine and sputa were discharged. The reasons against considering them to be entozoa were: first, that, he having seen three, no other observer had noticed them; second, their color, which he thought would not probably exist if they had been formed within the body and always from the influence of light; and third, that if made to live in urine, they could not exist in simple water for a month.

Dr. Isaacs said he had seen some animals discharged from the skin, similar to these specimens, but black.

Dr. Uhl presented the stomach of a boy, who, in a scuffle, was wounded by a cheese knife, which entered between the cartilages of the seventh and eighth ribs, a little to the left of the median line. The boy lived but six hours. On the anterior wall of the stomach there were three wounds. There was a wound in the diaphragm, in which a portion of the stomach was strangulated. Blood was found in the cavity of the left pleura, but none in the abdomen.

Dr. Uhl presented the aorta of a man killed by a pistol ball. The ball entered between the fifth and sixth ribs on the right side, four inches below the armpit, passing through the aorta and lower lobe of left lung, and lodged in the integuments of the left back, between the sixth and seventh ribs. [A great portion of the deflection in the course of the ball was evidently produced by the force of the current of blood in the aorta carrying the ball downward.—Ed.]

Dr. Markoe thought that the established rules as to the comparative size of places of entrance and exit made in gunshot wounds, were incorrect. The case of a boy, now in hospital, was referred to, where one ball had passed through both knees without touching the bone, in which the first wound of entrance was by far the largest of the four. Much, however, depends on the tension of the parts, the character of the tissues, and their proximity to bone.

Dr. Sewall exhibited the stomach and heart of a man, aged 65, who had died very suddenly, almost while saying that he was improving in health, and directly after an agreeable conversation with a relative. The symptoms were only generally arrived at. For thirty years he had been an invalid, complaining principally of difficulty of breathing at times, which was referred, now to asthma, and again to disease of the heart. He had been affected with an irregular, capricious appetite, and many indefinite stomachic symptoms, referred in general to dyspepsia. For a year past this latter difficulty had increased upon him, accompanied with occasional vomiting, and frequent diarrhœa. He has, at intervals, vomited consid-

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erable blood. For a few weeks past he had been more than ever troubled with dyspnœa, which at times was so severe as to give the sensation of impending dissolution. The feet, hands, and scrotum have been highly anasarcous. Two days before his death, he vomited a good deal of blood, and for the last month the diarrhœa has been very considerable. He also suffered from hæmorrhoids.

The postmortem examination was made thirty hours after death. The hands, feet, and scrotum were highly œdematous, and there was considerable effusion into areolar tissue about the chest. The lungs were healthy, and crepitated everywhere, except in the lower right lobe, which was congested. Frothy serum exuded from the incisions in the upper left lobe. There was about one half-gallon of clear serum in each pleural cavity, but no adhesions in either. The heart is of natural size, and overlaid with fat. Water poured into the aorta, makes its way slowly into the ventricle. The aorta and aortic valves are dotted with atheromatous deposit. The aortic valves are slightly thickened; the mitral valve is healthy.—The muscular structure of the heart is flabby, and moderate pressure causes the finger readily to penetrate its substance.—The right ventricle was engorged with blood, and its valves are healthy. The liver was firmly adherent to the diaphragm over its right lobe, natural in size, but rather paler than usual. The gall-bladder was empty. The spleen was healthy. The kidneys were natural in size and structure, but of a deep red color; and within the capsule of the left one there was a small abscess, containing four or five drops of thin, dark colored pus. The stomach is of natural size, and contains a small amount of thick, reddish mucus. About the middle of its greater curvature is a mass of soft, pultaceous matter, of a brick-dust color, as large as an egg, apparently adherent to the mucous coat, and projecting into its cavity. There is no abrasion or discoloration of the peritoneal surface at the point of attachment of this mass. Placed in water, it separates into a filamentous structure, having a ciliary motion in the fluid, and presenting an appearance like that of exaggerated cilia. The stomach, elsewhere, was healthy. The peritoneal cavity contained perhaps two quarts of clear serum. The omentum was studded with fatty masses, of various sizes, which floated in it. The brain was not examined. The tumor was referred for microscopic examination.

The cause of the sudden death being inquired into, Dr. Clark said there was nothing, in his opinion, revealed by the postmortem examination to account for it, but suggested that it might have occurred from apoplexy. He had cognizance of six cases wherein death had occurred instantaneously as a consequence

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of a sudden effusion of blood around the medulla oblongata, interrupting the functions of the respiratory nerves. [Is not the condition of the heart itself sufficient to account for the suddenness of the death, without going beyond the postmortem appearances, and that whether it be considered a case of weakened or of fatty heart?—Ed.]

Dr. Post exhibited a bone from the external meatus of the ear of a young lady, aged fifteen years. She was first seen by Dr. P. four months ago, and was then complaining of intense pain about the ear, which had existed for many months previously. Deep suppuration about the mastoid process was suspected, over which, and through the periosteum, an incision was made, from which pus freely escaped. Necrosed bone was supposed to exist at the bottom of the wound, and caustic potash was applied to keep it open. The swelling, which had been very great, subsided posteriorly, but increased anteriorly, after the incision. Three weeks ago, being again consulted, the anterior swelling was found greatly enlarged, and a fungus tumor, prominent and very painful, protruding from the old wound. Ether having been given, a free incision was made through the tragus into the external meatus, when two portions of loose bone were found, and the finger could be passed an inch into the meatus. The patient is now doing very well, and will probably be restored to health, though hearing on that side is lost. The facial nerve of that side was paralyzed.

Dr. Dalton exhibited a dog whose spleen he removed eight days ago. The animal is now in good spirits, and eats well. The attention of the Society was called to the appearance of the eyes caused by a white color of the iris.

Dr. Batchelder suggested that this was common in horses, and they were called wall-eyed on account of it.

Oct. 25th. Dr. Clark exhibited five specimens. The first—the heart and aorta of a woman seventy-three years old, an inmate of a charitable institution on account of her age and infirmity, who was not known to have any disease till the time of her death. She had complained only of a little pain low down in her side. While engaged in some light work, she sudenly died. A large aneurism of the aorta was found, involving the entire arch, which had burst into the left pleura. The heart was healthy.

The second specimen was a liver and kidney taken from a man who died of pneumonia occurring upon the cachexia of miasmatic fever. He had for a long time been pallid, and was much emaciated. The legs were swollen, and dotted with a bright purpura on his entrance to the hospital. For a week he was treated with tonics and nutritious diet, when the physi-

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cal signs of pneumonia were observed; and for eight or ten days he went on hopelessly. Hemorrhage from the mouth and tongue then occurred, succeeded by epistaxis and discharges from the bowels, and he sank from exhaustion. The colon was half full of dark matter, blood mixed with fœces; nothing remarkable was found in the lungs. The liver was in a state of fatty degeneration, the left lobe being marbled with light grey spots, presenting that form where the disease commences in some lobules, and then extends to those in the vicinity, leaving some parts untouched. The kidney was a little larger than usual, and contained a moderate amount of fat. Some of its cells were granular, and some filled with fat, inducing the belief that Bright's disease was commencing, though the urine, which was once examined, contained no albumen.

The third specimen was one of apoplexy, occurring in a man sixty years old. He was admitted to the hospital while insensible, and died two days afterward, his history not having been obtained. A large effusion into the substance of the brain was found in the upper and anterior portion of the left hemisphere, and a smaller one in the middle and upper portion of the right lobe. The point of interest in the case was, that while the lesser effusion was in the right hemisphere of the brain, the greatest paralysis was on the left side of the body.

The fourth specimen was a small portion of the superior articulating surface of a tibia. The patient was admitted to the hospital six weeks before the rheumatism, of which he had been complaining for five or six weeks. On the second day of October, it had subsided at every part except the right knee. There the swelling and redness continued, and fluctuation was discovered, the result of a secondary synovitis. Before death, the cause of which was not determined, the swelling subsided, and motion was partly restored. The opposite surfaces of the synovial membrane was reddened, and about a half a teaspoonful of blood was found. The femur was healthy. A ring of ulceration extended half round the left anterior articulating surface of the tibia. The marks of a former chancre on the penis suggested a syphilitic origin. The mesenteric glands were all more or less enlarged, of a yellowish white color, and had all undergone a peculiar change. A specimen was presented some time ago, where the glands had undergone a species of degeneration akin to that of the waxy liver, and it was thought this might be of the same character. Close examination revealed a very different condition of things. The tubes were found mostly denuded of epithelium, and loaded with fat, which was readily discharged from them. They were overlaid to an extraordinary degree with a fibrous tissue thicker than that naturally belonging to them. None were

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healthy. In the midst of the glandular tissue oil was abundant. As in the kidney and the liver, this fatty degeneration was associated with a low grade of inflammatory action, producing an excess of the fibrous element of the part.

The fifth specimen was one half of a kidney, having to the eye a healthy appearance. To the touch, however, it was hard and unyielding, and its tissue was uniform. It was taken from a man thirty-three years old, who was admitted to the hospital October 20th, his wife and child having just died of cholera, and being supposed to have the same disease. He was a stout, athletic, well-developed person, and was reported to have been well till four days before. When admitted, he had diarrhœa, three or four stools daily, and vomited occasionally. His legs and hands were very cold. He was weak and drowsy, and it was difficult to fix his attention, he answering questions only in monosyllables. His face was neither flushed nor pale. The pupils were dilated, and unaffected by light. There was no cramp or convulsion. The pulse was 60, and feeble; the capillary circulation everywhere slow. Twenty-four hours after admission, having passed no urine, a catheter was introduced, but no urine was found. Twelve hours later, half a pint was drawn off, which was highly albuminous. The second day after admission, he expectorated continually, and was unable to answer questions. He gradually grew more comatose, keeping his eyes wide open, and giving no evidence of any sensation for five hours before death. He died thirty-eight hours after admission, his disease being supposed to be arachnitis. The brain was found to be entirely free from inflammatory effusion, but there was a little venous congestion. The convolutions were flattened, as was supposed, from internal pressure. There was no fluid in the ventricles. On subjecting the kidneys to microscopical examination, three-fourths of the tubes were found to be denuded of pithelium, which was replaced by fat. Not one tube in twelve was healthy. The case was one of uræmia, which so closely imitates arachnitis as to present great difficulties in diagnosis in the early stages of the disease.

A discussion followed upon the impropriety of trusting to the unaided eye alone in post mortem examinations; grave mistakes being alleged to result from this course.

Dr. Metcalf exhibited five specimens, the first being a portion of the brain of a man of intemperate habits, who died of chronic arachnitis. On the anterior portion of the external lateral surface of the left hemisphere, is a patch of calcification three-fourths of an inch long, three-eighths of an inch wide, and of decided thickness, imbedded in the substance of the brain beneath the arachnoid.

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Dr. Peaslee asked if true bone was ever developed by any thing else than periosteum, except in those bony organizations found in the uterus and ovaries. The opinion of the members so far as expressed was that it is not. [Mr. Paget's opinion is that it is, and that both in the osteoid and in the osseous growth lacunæ and canalicules may be seen.—Ed.]

The second was a specimen of aneurism of the aorta bursting into the circular fibres of the œsophagus, dissecting between the layers of these fibres, and opening through the gastric peritoneum into the abdominal cavity. It was from a man forty years old, who entered the hospital the middle of September. He died a few minutes after reaching his bed. Nothing could be learned of his history. Forty-eight ounces of blood were found in the abdomen, which came through a rent of the size of a quarter of a dollar in the upper and anterior part of the gastric peritoneum, three inches to the right of the cardiac orifice of the stomach. The opening from the sac was not more than one inch in diameter, situate in its posterior wall opposite the origin of the left subclavian artery. The aorta was thickly studded with patches of atheroma. The heart was of normal size and degenerated by fatty growth.

The third specimen exhibited, for Dr. G. Weber, was a stomach and liver, with a duodenum filled with gall-stones preventing the exit of chyme from the stomach, and causing death by inanition. The specimen was taken from a man fifty-four years old.

The fourth specimen was a larynx exhibiting the condition of that organ in phthisical laryngitis. There was a slight ulcer just below the ventricles.

The fifth specimen, exhibited for Dr. Finnell, was a spleen weighing a little over six pounds, taken from a man thirty-one years old, who had never had any form of miasmatic disease. He had suffered from epistaxis and abdominal dropsy, unconnected with disease of the liver or kidney.

Dr. Elliott presented a specimen of aneurism of the thoriac aorta, from a man forty years old, who entered the hospital Sept. 3d. He then complained of cough, which had existed for only three weeks, with difficulty of breathing and a sense of pressure in the chest. He could lie only on his back. The cough resembled the grunting of hogs. When seen by Dr. E., no pulsation was perceptible in the wrist or ankle, in the brachial or femoral artery. Percussion over the sternum was markedly dull. He died half an hour subsequently, just after returning from the water-closet. There was no rupture or extravasation of blood. The heart was healthy, though filled with blood. The lungs were much congested. Other organs were healthy.

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Dr. Peaslee called attention to the fact that, in this case—as in almost all cases in which death occurs without rupture of the aneurism—the usual amount of *hypertrophy* of the heart is not found. The usual hypertrophy is desirable, as securing the circulation of the blood through the aneurismal sac, though the friction is increased by the disease. And we may learn from this case the importance of insisting on the strictest rest on the part of the patient, in all cases of aneurism of the aorta in which the usual amount of cardiac hypertrophy is not known to exist.

Dr. Allyn exhibited, for Dr. Van Buren, the genito-urinary organs of a patient operated upon for stone. He was admitted to the hospital Oct. 10th, having been long a sufferer from this affection; and having had an operation performed a year and a half previously, when some calculi were removed. Dr. V. B. operated on the 16th of October, removing fragments of stone. The patient died the same day from prostration. The coats of the bladder were found greatly thickened, and there was a large sac in the prostatic portion of the urethra. Near the opening of the right ureter, a sacculus was discovered, containing a calculus. On the opposite side, near the opening of the left ureter, a second sacculus was found, communicating with a cavity, probably an abscess. The ureters were dilated, and a calculus was found in the right kidney, the pelvis of which was in a state of chronic inflammation. In the left kidney there were indications of inflammation, and at its summit there was a small urinary cyst. In the membranous part of the urethra there were one or more fragments of stone.

Dr. Batchelder asked if there was any way of diagnosticating a sacculated stone, and was answered by the negative.

Dr. Markoe presented a portion of a spleen taken from a German girl, stabbed eight weeks previously. The instrument entered just below the tenth rib on the left side, at a point equidistant from the anterior and posterior median line. Moderate hemorrhage ensued, but there was no evidence of internal bleeding. A day or two after admission to the hospital, symptoms of peritonitis, mingled with those of hysteria came on, which were controlled by opium, and gradually disappeared. When far advanced in convalescence, fever came on, and was traced to moral causes, following a violent rage; the patient afterward assumed a different aspect. Her countenance had the hue of malarious infection, and this led to the suspicion of spleenic disturbance. Hectic ensued. Pain and tenderness were complained of over the side for a space of six inches up and down, and she rapidly failed. Till within two or three days of death, the lung was unaltered in its physical

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signs. Pneumonia of the lower lobe was then revealed; purulent matter was expectorated; and the patient died from suffocation.

At the lower part of the lung an abscess of the size of a small orange was discovered, in the track of the wound. Below the diaphragm was a second much larger abscess, connected with the first by a cribriform communication. Imbedded in this cavity lay the spleen, bathed in pus. Its lower part exhibited a fibrinous condition, with a thickened peritoneum. Its upper part was healthy. The connection, if any, that existed between this condition of the spleen and the marked pallor of the countenance, is the important feature of the case, and worthy of a close investigation.

Dr. Macready presented the uterus of an elderly woman, who died of cancer of the lung. There was upon it an appearance of a cicatrix following rupture of the uterus; but Dr. Metcalfe remarked that in a similar case the appearance was produced by an enlarged and atrophied blood vessel, and it was referred for examination.

Dr. Hutchinson exhibited a portion of the genital organs of an unmarried female, about forty years old, who died of cholera, August 12th. There was entire absence of the uterus. Dr. H. gave a synopsis of thirteen additional cases of a similar character, collected from various journals. In some of these, the uterus may have existed in a rudimentary state.

Dr. Bauer spoke of a well developed woman in whom no uterus could be detected, on careful examination. There was a small opening near the sternum, from which a serous fluid exuded once a month.

Dr. Hutchinson also presented a gall-bladder entirely filled by two gall-stones.—*American Medical Monthly.*

Twins of Different Color.—Dr. A. F. Attaway records in the *South. Med. & Sur. Jour.*, June, 1854, the following interesting case:

Mrs. C———, a white woman, the mother of three children, gave birth to twins, on the 16th of January, an interval of an hour intervening between the births. The first born was very dark, and had every appearance of being of African paternity. Not being willing to suggest such a thing, I tried to explain the matter by attributing the color to cyanosis. At the expiration of one hour, the second child was born, and had very light-colored hair, fair skin and blue eyes, which made the contrast very striking. The condition of the mother and children was such that they required medical treatment for several

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weeks, during which time I marked the great difference between the children with peculiar interest. After the recovery of the woman and her children, seeing the African characteristics more and more developed, I asked the mother to give me a correct relation of the circumstances connected with her conception, &c. After some hesitation, she gave me the following history of her case: She said, that five days after the cessation of her last menstruation, she had sexual intercourse with the white man, whom she considered the father of the white child. Three days thereafter, making eight days after menstruation, she cohabited with a negro man, who, she said, was the father of her other child. She assured me that this was the only coitus she had with the negro man for more than a month after she menstruated. If this be true, she conceived at that time. The precise period of her other conception is less definite, in consequence of the fact that she had connection with the father of her white child at different times during the month following her last menstruation.

On Gonorrhœa. By PATRICK H. CABELL, M. D., *Selma, Alabama.*—It is generally admitted, I believe, that the more difficult a disease is of cure, the greater the number of remedies and specifics we have for it. This holds good of gonorrhœa especially; for every journal brings us a new method, vaunted as better than those which have preceded it. In this paper I do not purpose to swell this long catalogue; but merely wish to lay before the profession a mode of using some of the old remedies which renders them less offensive to the patients.

Ricord holds that the beneficial effects of copaiba result from its absorption into the blood, and after-elimination by the kidneys; medicating the urine which is to pass over the inflamed mucous membrane of the urethra, and thus effecting a cure. The great drawback to the administration of copaiba is its unpleasant taste, and its tendency to produce disorder of the stomach and bowels to such an extent that patients refuse any longer to take it. I have lately administered it in the form of water. This does not produce any unpleasant intestinal results, as nausea, catharsis, etc., and is scarcely offensive to the taste or smell. I use the oils of copaiba, cubebs and juniper, and in chronic cases add the oil of turpentine—these are by the aid of carb. magnesia combined with water, and then thrown on a filter—the liquid resulting is perfectly limpid, has the taste and odor of the oils from which it has been made, and can be taken in large quantities without unpleasant effects. It proves diuretic, and is no doubt absorbed

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at once from the stomach, leaving no residuum, as is the case when these substances are administered in the usual way. I have not had much experience with this water as yet, and call attention to it in the hope of having its value tested by those living in a less virtuous community than this. I will detail a case, however, in which it proved rapidly successful.

L., a slave, contracted gonorrhœa, which continued unchecked and untreated several weeks; at the end of this time he was advised by some of his sable brethren, as a curative means, to have promiscuous intercourse with women: he followed this advice, having at the same time chordee: the result was profuse hemorrhage lasting several days. When he presented himself the blood was still flowing from the external meatus, this was checked with a solution of acetate of iron, diluted with two parts of water, used as an injection; the hemorrhage recurring again in some hours, it was repeated with perfect success in arresting the further flow of blood. He was then directed to take eight ounces a day of the balsamic water made as described above.

℞. Ol. Copaiba, ʒij.; Ol. Cubebs, ʒij.; Ol. Junip. ʒj.; Carb. Mag. Q. S.; Aqua, ℥viij. Mix well and filter. Dose—one fluid ounce repeated frequently.

The discharge rapidly lessened under this treatment, and the patient declared himself well in about a week.

[*Virginia Med. and Surg. Journal.*

On the Physiology of Menstruation and Conception. By Prof. Bischoff.—The attention and laborious investigation of the student has been long directed towards that most interesting and important point, the physiology of menstruation and conception, and amongst the many who have labored in this field, we know of none more distinguished than Professor Bischoff. We design to give our readers an abridged sketch of his recent labors, and the results to which he has arrived.

M. Bischoff gives in detail his examination of the organs of generation in thirteen women, who had died suddenly whilst menstruating; the death, in most of the instances, being the result of accident or violence. These examinations were made with the greatest accuracy; and, when taken in connection with the previous history of each case, will aid very much in determining the physiological facts involved. Our space forbids us from presenting the minute details of each dissection, and we will therefore only give the deductions derived from them.

Professor Bischoff remarks that these cases confirm the doc-

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trine, that in woman at every menstruation a follicle ripens, swells, and bursts, that the ovum escapes, and that a corpus luteum is formed. The eleventh case seems to prove that the full consequences of menstruation are not in every instance necessarily carried out, but that a follicle may swell, and the ovum ripen without the bursting of the follicle, or the escape of the ovum. Such a condition will cause sterility, notwithstanding menstruation. Perhaps, also, the pain of the menstrual period depends upon this incomplete development.

A woman may not menstruate, and yet she may conceive; for the essential condition, the ripening and escape of an ovum, may proceed, and only the usual outward symptoms of this event, the secretion of blood, fail. Professor Bischoff remarks, that he could never succeed in finding the ovum, but observes that he does not believe that it is so soon destroyed. He says there are but two cases known to him where it was so found, and that only one of these presents the desired certainty. This is the following observation of Professor Hyrtl, of Vienna: Therese Michal, aged 17, died on the 10th of October, 1844, of peritonitis, in the clinique of Prof. Oppolzer. She had only menstruated twice in her life, and the last time was two days before her admission into the hospital on the 8th of October. The breasts were tolerably developed; the pubes slightly covered with hair. The hymen was uninjured; the uterus of moderate size, compact, its cavity filled with a quantity of thick blood; the mucous membrane was so loosened as to resemble a half liquid plastic exudation. The lining membrane of both Fallopian tubes was suffused, loose, and covered with mucus. Both ovaries were of fair size, but the left one showed a ruptured follicle of the size of a large hazelnut, filled with semi-fluid blood. Prof. Hyrtl submitted the parts to careful inspection under the microscope on the same day. Neither in the vagina, uterus, or tubes, could he find a trace of spermatoza. But by a careful examination of the left tube, in that part which traverses the substance of the uterus, he found an ovulum, with all its characteristic properties, somewhat dull and turbid indeed, but fully recognisable. Hyrtl believes he even detected the germinal vesicle. This is a remarkable anomaly, since the germinal vesicle of every ovum, when it has left the ovary, has disappeared. Professor Hyrtl had the ovulum immediately drawn by his artist, and exhibited it on the same day in his lectures on physiology. This case is free from doubt, as there is no room to suspect coitus. Prof. Bischoff regrets that he cannot admit as much with reference to the cases of Dr. Letheby, published in the "Philosophical Transactions" for 1852, but his reasons of dissent do not appear to be very valid.

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Prof. Bischoff takes occasion to discuss the question, as to the differences between the corpus luteum of simple menstruation and that of conception. In the cow and sow the corpora lutea of the non-pregnant are altogether similar to those of the pregnant, and he has made the same observation in the bitch, the cat, and the porpoise. They disappear more quickly when no conception follows. In the human female, at the earliest period of the bursting of the follicle, the filling of it with blood, and the beginning of the development of the membrane of the follicle, to the formation of the corpus luteum, there is no difference at all. But in the further development of the corpus luteum, the impregnation of the ovum and gestation bring about a material difference. The corpus luteum in simple menstruation never attains the full stage of formation up to the complete filling up of the follicle and the metamorphosis of the blood coagulum; but this substance only develops itself into a peripheral layer, and soon falls into retrogressive metamorphosis. It shrivels up, and only leaves at the next and the succeeding menstruation a more and more indistinct spot, changing from yellow to brown and black, and soon there remains nothing but a scar; which lasts for a time, and gives evidence of the past process which has at an earlier period taken place on the surface of the ovary. The corpus lutea of conception, on the other hand, goes on developing itself throughout the first months of pregnancy, and attains a fullness of size, color, and texture, which the menstrual corpora lutea never reach. It lasts throughout the whole period of pregnancy, and disappears after delivery. It may, however, be questioned whether it has a great diagnostic value. In the first period, so long as there are no other signs of pregnancy, these differences either do not exist, or are very difficult to determine. After delivery, when the signs of pregnancy in the uterus have disappeared, it again becomes difficult to distinguish them from the corpora lutea of fourteen days or three weeks' standing, resulting from menstruation. And where pregnancy is plain, from the state of the uterus and other parts, the corpus luteum is of no value. Prof. Bischoff, therefore, concludes that the corpus luteum cannot be used in the determination *of doubtful cases.*

Professor Bischoff holds it to be proved that conception and pregnancy depend absolutely upon menstruation at the period of the ripening and expulsion of an ovum. He remarks, however, that it can scarcely be doubted that the time occupied by the transit of the ovum from the ovary, the arrest of the ovum, and the preparatory changes in the uterine mucous membrane, suffer great differences in individuals, and hence entail a longer or shorter duration of gestation.—*Henle's Zeitschrift and Monthly Journal Med. Science.—Ibid.*

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On the Nature and Causes of Green Vomiting.—Dr. FRAZER details (*Dub. Hospl. Gazette*) several cases of green vomiting, and adds the following remarks:—I consider this green matter is composed of the blood in an altered and modified condition, the discharge being altogether of a hemorrhagic character. Repeated microscopic observation, in those instances in which I have noticed its occurrence for some time past, has confirmed my ideas regarding its nature, and examination shows that the little fragments of which it consists are various-sized clots, containing abundance of blood globules: this alone might decide the inquiry; however, I am desirous of placing it on other grounds, in addition to such as are afforded by the microscope. I may, therefore, bring forward the following arguments which further support the view I have taken. 1st. The form of vomiting alluded to occurs in diseases where there is much congestion, and inflammatory engorgement of the vessels of the stomach or intestines, as in gastritis, and fevers with gastric complications; and after death we find patches of softening in the mucous membrane, or decided marks of excessive vascularity; at least such has been the case in those fatal instances where I have had the opportunity of inspecting the stomach. 2dly. The coincidence of vomiting of ordinary blood, in addition to the green matter, which sometimes occurs, and as was noticed, for example, in the case of the woman with enlarged spleen already alluded to; besides, I have remarked, that in many cases of fever which were attended with this peculiar green discharge, hemorrhagic purpuric eruptions were frequently seen. 3dly. We have the physical properties of this substance; it forms small green clots in the fluid, in addition to tinging it with its peculiar hue, as we might expect blood to do. 4thly. We must consider that a similar green color occurs in various parts of the body, and under very dissimilar circumstances. This is, perhaps, the most interesting branch of our subject, and one on which medical records afford little information; as instances of this change we have, among other examples: The peculiar green hue of contusions that are of some standing, and the green color of the ecchymoses that occur on the extremities in land scurvy, many cases of which were noticed in the hospitals in the late years of famine. The color of the great intestine in various cases of fatal dysentery, and of the mucous tissue of the stomach in inflammatory gastric affections: The grass-green appearance of the interior of the bladder, and of the kidneys after death, in many acute or sub-acute diseases: The well-known greenish tinge often seen in moist gangrenous affections: The color of the body as it begins to decay after death: The green hue

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of coagulable lymph, and of purulent exudations in bad constitutions, and many other similar facts in pathology that might be enumerated, which are as yet unexplained.

[*New York Med. Jour.*

On Physical Diagnosis of Fevers.—By E. A. Parkes, M. D.—There are two diseases not unlike typhoid, to which I wish now to direct your attention, and which may be mistaken, and are mistaken for typhoid—one is *pyæmia*, so called, but it is quite untrue there is any pus in the blood; the other is *acute tuberculosis*. In pyæmia we have its positive indications absent, such as inflamed joints, diseased veins, etc.; we have septic materials in the blood in pyæmia, and a vital change perhaps in that fluid, but you cannot well mistake it for typhoid fever. There is another disease, however, which has been lately quite mistaken for typhoid—this is *acute tuberculosis*, in which, more or less, every organ in the body becomes studded with tubercles, and known in England and the continent as "military tubercles," in the intestines, heart, lungs, and in the female even in the uterus and pelvic viscera. It is a disease common in younger patients. The disease, however, is extremely rapid, in three or four weeks usually coming to an end. It is attended with febrile symptoms, furred dry tongue; the symptoms, in fact, all like as possible of typhoid. It runs parallel, so to speak, with typhoid, but is not typhoid. Acute tuberculosis is often mistaken for typhoid, but the *rose-spots are absent*. In these cases the best observers will make mistakes. These tubercular deposits are miliary; they are uniform over the lung. We have no opportunity of comparing diseases in one part of the lung with another; no stethoscopic indications, in fact, but those of bronchitis. Again, in this disease of acute tuberculosis, the head symptoms are always most intense, from deposit, in the shape of acute meningitis; the latter produced by deposit of tubercle. It is, in fact, something quite out of the common way to find bad headache in typhoid; torpor is more common; and according as the disease advances, as a general rule, head symptoms are found to go away. You will find, also, if you study these cases in the wards of the hospital for yourself, that the pupils are dilated in meningitis, and that the special senses of hearing, taste, smell, etc., are all more or less affected. Deafness, for instance, is common; and, as I have just said, you will have most intense headache. Again, in one disease the abdominal symptoms will seize your attention; in the other, the head or chest symptoms. Diarrhœa is not so frequent in one; while in the other it is almost specific. In acute tuberculosis, you will not find the intestinal glands red

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and inflamed; in the other affection we are speaking of, it is very characteristic after death. The typhoid stools are liquid, yellow, or brown, containing albumen, and coloring matter of bile; this singular substance rendered mahogany color by nitric acid. In hospital I would advise you to familiarize yourselves with all these circumstances.

To sum up the whole matter, then, you will find that in these two diseases, confounded by superficial observers, we have a prominence, at the bedside, of head symptoms in one, and abdominal symptoms in the other. We have symptoms also of pyrexia in one. We may have "typhoid pneumonia," using these words now in a different sense, "typhoid" as an adjective; with all the other differential signs already indicated. Then bad influenza, with capillary bronchitis, may also be mistaken for one of these diseases, purulent meningitis and a disease lately described in Ireland "cerebro-spinal meningitis."—*Dublin Med. Press.—Ibid.*

On the Therapeutical Value of Ptyalism.—By M. Passot, *of Lyons.*—In a memoir published in the *Gaz. de Médicale de Lyon*, for June, 1854, Dr. Passot lays down the following propositions:—

1. There are cases in which mercurial salivation ought to be induced, no matter how grave may be its results.
2. Mercurial salivation has a double action; a revulsive action, far more energetic than that of the blister, and a *spoliative* action, or impoverishment of the blood.
3. Some individuals are insusceptible, and others extremely liable to ptyalism.
4. The surest method of inducing salivation, consists in the simultaneous use of calomel and mercurial inunctions.
5. It is doubtful whether salivation ever exerts *specific* influence.
6. Syphilis is not only curable without ptyalism, but it appears that the syphilitic manifestations cease to be affected specifically by mercury as soon as this phenomenon is manifested.
7. Ptyalism is especially indicated in peritonitis, metroperitonitis, simple meningitis, corneitis, retinitis, amaurosis by congestion, in obstinate orchitis and ovaritis, and certain chronic engorgements unconnected with degeneration of tissue.
8. Mercurial stomatitis is to be treated by rubbing the gums with powdered alum (Velpeau); by painting the mucous membrane with chlorohydric acid (Ricord), or with a concentrated solution of nitrate of silver (Bouchacourt). Repeated

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purgatives, and the application of Saturnine lotions to the neck, are useful as adjuvants.

9. As soon as the state of the mouth will permit, the patient should be allowed a good diet and the use of ferruginous medicines to combat the debility induced by the mercurial intoxication.— *Virginia Med. and Surg. Jour.*

Female Physicians.—A lady suffers from a headache, the female physician is called in, and prescribes a new bonnet. Another female doctor finds her patient dying to go to the seaside. The husband might as well write and take the lodgings instantly; the doctor will be sure to order it.

Prescriptions will be made up of new dresses, bonnets, boxes at the opera, broughams, a party now and then, increased allowances for housekeeping, trips out of town, and the thousand and one other little whims which ladies are constantly "dying" to be indulged in.

The doctors will declare late hours on the husband's part most dangerous; order them, as they prize their health, to leave off dining at their clubs; tell them that latch keys are undermining his constitution; that cold mutton once a week on washing days is highly beneficial to the system; and as for smoking in the drawing-room, or bringing men home unexpectedly to dinner—they would not answer for their lives a single day unless they give up such unwholesome practices.

Women have got already sufficient means of mastering us. Let them have doctors of their own sex to assist them, and the husband's case will be indeed a hard one.

"Perhaps, after all, there is no great absurdity in the notion of female physicians. All physicians except those who practice gratuitously, may be designated by the word female spelt with another *e;* and there are not a few of whom that is all that can be said. If the head of woman is not calculated for the formation of a diagnosis, she can at least shake it in a difficult case, as effectually as a man can; and having a softer and more musical voice than the masculine, she is better qualified than the most men are for that large part of medical practice which consists in whispering comfort to invalids."

[*Punch.—Ibid.*

Croton Oil.—Dr. Stark (*Lancet, Sept.*) recommends croton oil: one drop with colocynth every hour, "till a full evacuation of bilious matter is procured." Diluted sulphuric acid, with a little sulphurous acid, is sometimes simultaneously employed to check the vomiting.

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Upon the Nature of Sausage Poison.—The following data are extracted from a notice in Schmidt's Jahrbuch (78, 4) of Prof. Julius Schlossberger's essay upon the *Sausage Poison.* (Vierordt's Arch. xi. 5).

"The first notice of poisoning by sausage, dates from the year 1735. Most of the cases known up to the opening of the present century are found in the Journals of Autenrieth, Kopp, Hufeland, Henke, Rust, Horn, in the works of J. Kerner, and in scattered dissertations which Schlossberger particularly cites. The instances of *poisoning* by *fish* have been principally referred to abroad, by Christison, Lichtenstädt, Orfila, Chevallier and Duchesne.

Sausage poisoning is found, as is well known, to occur principally in *Swabia;* S. estimates the number of cases of sickness produced by sausages in Würtemberg, within the last fifty years, to be at least 400, and the number of deaths from the same cause at least 150. Isolated cases have also been observed in Baden, Bavaria, Hessia, Dessau, Prussia, Saxony, and two cases, not sufficiently confirmed, in France. The poisonings nearly always occur in the winter and spring months, the greatest number proportionately in the month of April, (two-fifths of the whole,) that being the period where those that are eaten have been kept the longest; while in the warm weather, they pass so rapidly into actual putrefaction with the development of stinking gases, as to cause them to be rejected by persons with even the most blunted senses.

Blood and *liver* sausages are the only kinds in which the poison ever forms, which S. explains by the mode in which the country people are accustomed to prepare and preserve them. They are, for instance, principally prepared from the blood, brain, liver and similar parts, that are more liable than others to pass quickly into decomposition; are mixed with materials also that easily ferment, such as milk and wheat flour, while the boiling is often incomplete, or too long delayed in warm weather. The smoking also is often incomplete, either from defective smoke houses or from the diameter of the mass being too great, (in the so-called "blungen," or hog's stomach). In such preparations the stinking putrefaction may be kept off or delayed, but full play is permitted to another species of decomposition the more dangerous, because impossible to be detected by the senses. Besides, these badly smoked sausages are often kept tightly packed in close, confined places. This kind of sausage, moreover, is often prepared by unskilful country butchers, or by the peasants themselves, who, to prevent the intestines from bursting, often purposely commit great er-

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rors in boiling and in filling them; too often leave hollows that are filled with fluid, or suffer the sausage to be too greatly penetrated by the broth. All the kinds of blood and liver sausages are of considerably greater diameter than those made from meat, and consequently are more difficult to stuff tightly and to smoke thoroughly (especially in the central portions) than the latter; the poisonous decomposition proceeding evidently from the centre outwards. In place of the blood of swine, that of cattle and of goats is often in part substituted, together with the plucks of sheep. That poisonous properties should likewise be found in such sausages cannot surprise us, when we bear in mind the similarity in composition of the blood and tissues of all the higher animals. Neither spices nor salt, which are generally used in great amount by the country people, prevent the commencement of this species of putrefaction. The character of the intestine used (those of swine and cattle) can have no influence upon the development of the poison, beyond that which arises from imperfect cleansing, and from the too great diameter, rendering the stuffing and drying more difficult.

But few *perciptible physical changes* are exhibited in the poisonous sausage. They often contain in the interior spots like curds or soft cheese, and occasionally are of a crumbly, almost brittle consistence, that extends more and more towards the circumference. Frequently nothing peculiar is presented to the taste or smell; the odor is somewhat disagreeable resembling that of rancid fat. It is very probable that this odor is due to the formation of volatile fatty acids, since the neutral fats are always present in these sausages, under circumstances favorable to the decomposition of their fatty basis, the protein bodies present serving as ferments, or perhaps giving rise, by their own spontaneous decomposition, to these acids. The taste is described sometimes as sour, sometimes as bitter, or as rancid. A sausage examined by S. showed in its centre softened, curdy places; possessed an acid re-action, (free lactic acid) an odor resembling butyric or metacetonic acid, and developed, by the addition of weak potash, an ammoniacal and also an extremely disagreeable odor; hydrochloric acid produced therewith copious fumes. The intestine was mouldy; the peripherical layers of the sausage were of normal appearance and not of acid re-action. It is not, however, proved that these softened places are the seat of the poison, many poisonous sausages not possessing them, and it is decided that different portions of the same sausage proved injurious with one individual and harmless with others; and of various spoiled sausages, subjected to the same conditions, some produced symptoms of poisoning, whilst others did not.

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The action of the sausage poison upon the human body has, however, been more thoroughly investigated than any other of its properties. The phenomena which it calls forth, consist of functional disturbance of the intestinal canal, of the nervous system, respiratory apparatus, and diminution of the secretions. These symptoms have often been compared with those produced by poisoning with digitalis and with lead. S. considers them of interest, so far as they are capable of throwing light upon the nature of the poison, and directs attention especially to the facts, that the rate of mortality is extremely great; that the poison operates far more fatally upon weak, old, decrepid persons, than upon those otherwise strong and in health; that it is extremely dangerous, even in very small doses, (one or two thin slices of sausage); and that acid fluids appear to heighten the poisonous phenomena.

No constant alterations are found upon the bodies of those that have died from this poison, other than inflammatory spots in the intestinal canal, great muscular rigidity and remarkably slight symptoms of decomposition. In cases where, on the contrary, even during life, evidences of dissolution of the blood and afterwards of rapid decomposition in the corpse are found, it is always due, in part at least, to the use of sausages in stinking putrefaction, and these cases evidently belong to an entirely different class of poisonings.

Nothing satisfactory is as yet known with regard to the action of the sausage poison upon *animals*. S. found that a famishing terrier, which had greedily devoured several ounces of a sausage, (with smeary, softened places,) showed no ill effects from it, after the lapse of even four weeks, although it had fatally sickened a number of men who had eaten of it. This coincides with the experience of many other authors. S. here remarks upon the great necessity of caution in the transference of the deductions from toxicological experiments upon animals to man, and vice versa, particularly with the carnivora, whose intestines, frequently containing large quantities of putrid substances, carrion, &c., require that the gastric juice should possess the most energetic digestive powers. Although Kerner poisoned a large number of animals with substances prepared from spoiled sausages, yet, S. remarks, that those experiments can have in this respect no value, because they were made in part with products from the destructive distillation of hog's fat, and the remainder with impure fatty acids, obtained from the common neutral fats by saponification and subsequent decomposition by the mineral acids, and were in no instance derived from spoiled fats.

According to Buchner and Schumann, who operated with the portions of spoiled sausage, soluble in alcohol, the diluted

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poison exerts upon animals little or no action; and even when concentrated has much less effect than upon man.

The views that have been formed at various times with regard to the *nature* of this poison, have proved for the most part untenable. For instance, that it is due to an impregnation with metallic poisons; that it is owing to a peculiar decomposition of the sausage forming prussic acid; that it depends upon certain constituents of the smoke, (creasote, pyroligenous acid, &c); to the use of poisonous seeds (cocculus indicus) in place of the ordinary species; and finally, that it is due to the production of Welter's bitter (carbazotic acid) or some similar substance. The opinion that the materials used in the noxious sausages have been obtained from diseased animals, is satisfactorily shown in most cases to be without foundation. S. Kerner's views approach nearer the truth, in considering the poison to be produced by a decomposition of the substance of the sausage, not, however, identical with the common forms of putrefaction. But as K. obstinately maintains the fatty nature of the poison, he confounds together the most varied products of the decomposition of the protein bodies with those of the neutral fats. Besides, the margaric and stearic acids, the oily pyrogenous acids and the less volatile fatty acids are not poisonous; at most, the latter are corrosive only in their very concentrated state. Of course, experiments with the products of destructive distillation can lead to no conclusions with regard to the nature of the products of fermentation and putrefaction.

The labors of Buchner and Schumann, who were the first to prepare the aqueous and alcoholic extracts of the sausage, only prove, 1st, that the poison is soluble in alcohol. 2dly, that the alcoholic extract is accompanied with much fat. Liebig represents the sausage poison as being a ferment arising from the putrefaction, and which introduces into the fluids and tissues of the living body its peculiar decomposition, and supports his view by fruitless attempts to isolate the poison, and by the destruction of the poison by treatment with alcohol or boiling water. While, however, Buchner's and Schumann's results rather contradict than confirm Liebig's position, experience has further shown that boiled and baked sausages can cause poisoning, and the phenomena produced (diminution of secretions, &c.,) are directly opposite to those produced by the poisons of putrefaction. Since all the theories of the nature of the poison, capable of experimental proof, are not yet exhausted, S. thinks it best to discard the idea of a ferment, as its nature prevents all further investigation, and in place thereof, he proposes his supposition as applicable to most of the cases, and which has already been strengthened by many facts. This theory attributes the action of many poisonous

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sausages to the presence of an organic base, somewhat similar to nicotine, and is founded upon, 1st, the premises already, in great part, established, that in poisonous sausages and cheese, organic bases are formed by the decomposition of the protein bodies; and 2dly, upon the previous supposition that they give rise to these peculiar symptoms of poisoning, a thought that seems already to have occurred to Kastner, as he suggests the existence of an alkaloid derived from the mould in the sausages. The presence of such volatile bases in the decomposition of nitrogenous animal substances, from which ammonia is subsequently formed, is certainly more than probable, and in many cases stated by Stenhouse, shown to be constant. S. has also found ammonia in large amount in the noxious sausages, and remarked at the same time, a peculiar, disagreeable odor. The behavior of the greater part of the substances homologous with ammonia, in the organism, is still unknown, and at all events each of them requires a physiological investigation; for out of the innumerable bases that have been and will yet be discovered, many, that are very similar in composition, exert very different effects upon the body. On the other hand, nicotine, coneine and spartein (the three best known representatives of the volatile bases from the vegetable kingdom, and whose close relation with ammonia cannot be ignored) are well known for their extraordinary poisonous properties. It is certain that alkaloids, like leucine and tyrosine, are found in old cheese, and if these harmless substances occur, why should they not, under certain circumstances, be accompanied by poisonous bodies possessing the same chemical character? S. here observes, that opium, together with bases that act powerfully upon the organism, also contains alkaloids that are perfectly indifferent in this respect. S. also cites the instance of the volatile bases that Wertheim and Hofmann have shown to exist in herring pickle (propylamine, trimethylamine) S. finally endeavors to make use, for his hypothesis, of the circumstance discovered by Kerner and A——, that the products of destructive distillation of fresh blood-sausages cause similar symptoms in animals to those of the sausage poisoning. He there points out (according to Anderson's investigations upon the pyrogenous oil from bones) that during the destructive distillation of nitrogenous bodies, together with the so-called empyreumatic bases, the alcohol bases, such as methyl, æthylamine, &c., also appear, and that these, (like the separation of leucine into valerianic acid and ammonia), form the necessary steps, in place of the fatty acids and ammonia. S. would also seek for the same volatile bases in poisonous mushrooms, in ergot, in rotten potatoes, in the air of graves and cloacæ, and even in the so-called cadaveric

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poison, and considers them as the cause of the action of these substances upon the organism.—*Translated for Medical Examiner.*

PART IV.

EDITORIALS.

DEATH OF PROFESSOR E. DEMING.

It becomes our painful duty to announce the death of our colleague, Dr. E. Deming, Professor of Pathological Anatomy and Clinical Medicine in the Medical Department of the University of Missouri. This event took place on the 23d of February, at his residence in Lafayette, Indiana, in the 58th year of his age. Dr. Deming was a native of Massachusetts. In the year 1819, he emigrated to Ohio, where he remained until 1833, when he removed to Indiana, where he has continued to reside ever since. During the two past winters he resided in our city, and fulfilled the duties of his chair as a public teacher of medicine, which position he filled with credit to himself and great satisfaction to those with whom he was associated.

Dr. Deming was a man of fine talents and of exalted character, and as a gentleman and a physician he stood deservedly high wherever he was known. His loss will be severely felt.

Dr. Deming's name appears as one of the editors of this Journal, but from the fact of his only spending a few months of the year in our city, he has never taken an active part either as editor nor as a contributor to its pages.

American Medical Association.—The eighth annual meeting of the American Medical Association will be held in the city of Philadelphia, on Tuesday, May 1st, 1855.

The secretaries of all societies and other bodies, entitled to representation, are requested to forward a correct list of their respective delegations to Dr. Francis West, one of the secretaries, as soon as possible.

It is to be hoped that the profession in Philadelphia will carry out the wishes of the Association as expressed at the

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last meeting held in this city, and dispense with all costly public entertainments. These public feasts have grown to be disorderly and even in some instances riotous assemblies, unworthy the character of a grave and dignified profession, and should therefore be entirely suppressed.

We hope also that the Association will not be in as great a hurry to get through as heretofore, but that they will remain in session long enough to admit of the reading and discussing of all reports that may be presented, as well as to consider such other matters as may be brought forward.

Medical Association of the State of Missouri.—We would again remind the physicians of Missouri, that our State Association will hold its fourth annual meeting in the town of Lexington, on the second Tuesday (being the tenth day) of April, 1855. We hope to see a large attendance on the occasion.

Commencement Week in St. Louis.—The annual commencement of the Medical Department of the St. Louis University, was held in O'Fallon Hall, (College Building) on Thursday evening, March 1st. The degree of M. D. was conferred by the President of the Board of Trustees on thirty-six young gentlemen, graduates of the present session.

Prior to the conferring of the degrees, the following, being the usual promise, was read and publicly assented to by the graduates:

"You do solemnly promise that you will, to the utmost of your ability, exert your influence for promoting the welfare and respectability of the medical profession; that you will demean yourself honorably in the practice thereof; that you will not put forth any nostrum or secret method of cure, nor engage in any other species of quackery; and that you will not publish any matter or thing laudatory of yourself, or derogatory to the profession; and in the conferring of this degree, it is done with the express understanding that the Faculty reserve to themselves the right and privilege to revoke said degree, whenever the promise here made shall be violated."

Names of the graduates.—Zachariah Anderson, Jno. Berghoff, Theodore Canisius, A. Junius Claiborne, Moses Chapman, William Dobson, John W. Easum, John J. Ferguson, M. M. Goodman, Benj. H. Harris, G. Moreau Holt, Ignatz Heidel, Frederick Horn, W. Johnson, A. G. Jones, J. H. Kleine-

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korte, John Lebrecht, John R. Lewis, J. L. Maxwell, J. B. McCartney, J. E. McDavitt, David McDill, T. J. McGorrisk, Joseph B. Mudd, James H. Petty, Francis Rieger, Augustus Rooch, D. K. Rule, John Shumate, Chas. L. Smith, C. C. Swanwick, John H. South, John Thomson, J. M. Walker, Peter Young, John G. Zeller.

The following gentlemen were admitted to the Degree *ad eundem:*

Dr. D. H. McCord, of Illinois; Dr. G. W. Taylor, of Missouri; Dr. N. Plummer, of Illinois.

The valedictory address on the occasion was delivered by Professor A. Litton.

The annual commencement of the Medical Department of the University of Missouri was held in the Mercantile Library Hall, on Tuesday evening, February 27th. The degree of M. D. was conferred by the Dean of the Medical Faculty on thirty-one graduates, as follows:

Alfred C. Baker, Algernon Sidney Barnes, Benjamin N. Bond, Samuel M. Cheek, James Robinson Douglass, William P. Davis, Jesse R. Evans, J. W. Farmer, William B. Glover, Frank Hunter, Cuthbert T. Jones, Perez S. Jennings, William Lemmon, George H. Long, John L. Matthews, William B. Maupin, John J. McDowell, Henry Clay McPherson, William M. Pettit, James G. Phillips, Peter A. Salling, Lyman B. Slater, J. W. H. Spann, J. L. Thomas, Alonzo V. Thrap, Junius Tompkins, William H. Winfrey, Jesse W. York, David C. Wallace, William Wickman.

Drs. John G. Bryan, Sr., and A. Parkhurst, were admitted to the *ad eundem* degree.

The valedictory address was delivered by Professor Spencer.

Both addresses were able and interesting, and were listened to with undivided attention by a large and intelligent audience.

Complimentary to Dr. J. H. Watters.—Dr. R. S. Holmes having been prevented by ill health from filling his chair of Physiology, in the Medical Department of the St. Louis University during the past winter, Dr. J. H. Watters lectured in his stead. At the close of the session, the following action was had by the class:

Medical Hall St. Louis University.

At a meeting of the graduating class, held March 1st, 1855, J. B. Mudd was called to the chair, and M. M. Goodman ap-

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pointed secretary. On motion J. B. McCartney, D. K. Rule and J. W. Ensum, were appointed a committee to draft resolutions expressive of the sense of the meeting. Whereupon, they reported the following which were unanimously adopted.

Resolved, That the graduating class of the Medical Department of the St. Louis University are under many obligations to Dr. J. H. Watters for the able and instructive course of lectures delivered by him during the present winter, and that they admire the originality of thought and the depth of research that he has displayed in the science of physiology.

Resolved, That as the said course of lectures was the first which he has delivered, and as he was called on to enter upon it without time for previous preparation, we most heartily wish him the opportunity of again lecturing upon a science to which he is so ardently devoted.

Resolved, That a copy of the foregoing resolutions be signed by the officers of this meeting and transmitted to the St. Louis Medical and Surgical Journal for publication.

J. B. MUDD, *Chairman.*

M. M. GOODMAN, *Secretary.*

MEDICAL MISCELLANY—SCISSORS AND PEN.

Blancard's Pills.—The difficulty of procuring the iodide of iron in such a way that decomposition should not take place, has long been felt by the profession. These pills are intended to remedy this. The statement of the maker is that each pill contains one grain of iodide of iron, and one-fifth of a grain of finely powdered iron, all enveloped in balsam of Tolu. They are uniform in shape and size, and have but little odor. We have no experience in their use; but having received the sanction of the French Academy, they come to us with a recommendation which entitles them to a trial. Should they prove to be all that is hoped, they will constitute a valuable addition to our pharmaceutical preparations.

Aromatic Vinegar.—This pleasant article may be prepared thus: take of strong acetic acid sixteen ounces, camphor one ounce. When dissolved add one ounce each of essential oil of cloves, lavender and lemon.

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Viviparous Fish.—Dr. Bennet Dowler has recently discovered in the vicinity of New Orleans a small osseous fish, which proves to be vivaparous, having no less than twenty-two well formed young in its body at the time of examination. Dr. D., however, yields the priority of description of vivaparous fish to Dr. Gibbons, who found them in California.

To all whom it may concern.—Good openings for medical men are said to invite occupancy at the present time, both in Nebraska and Kansas. The people there need good surgeons, with a proper variety of instruments, as well as physicians and druggists, and those who are earliest in the field will lay the foundation of a valuable professional patronage.

Dr. Thompson, the wretch who first seduced and then murdered Miss Pharr, of Virginia, has, it seems, been acquitted—but upon what pretext we do not know, except it be upon the general principle that the sympathies of jurors now a-days are with the murderer and the abandoned, rather than with the virtuous and innocent. Such a professional monster deserves to be gibbeted on a pinnacle of infamy.

Horrors of War.—Few of the horrid details respecting the bombardment of Sebastopol, by the English and French forces now operating in Russia, have excited so much commiseration as the destruction of the great hospital in that city, wherein were upwards of two thousand sick and wounded, who all perished by the conflagration.

Robbery by means of Chloroform.—It is related in the newspapers, that a Col. Berrien, of Rome, Ga., was riding in the cars to Augusta one evening, in company with his family, when a stranger took a seat beside him, and after some conversation actually succeeded in administering to him sufficient chloroform to produce insensibilty. He then cut the buttons off his overcoat, and extracted, from his side pocket, a package of bills amounting to upwards of $5,000, and from his pantaloons pocket $1,000 more. At the last accounts it appears that the Col. had not recovered from the effects of the anæsthetic, nor had his friends recovered the money.

Dr. R. N. Graham.—This misguided individual who was convicted a short time since of manslaughter, for killing Col. Loring, at one of the hotels in New York, last summer, has been sent to the State prison at Sing Sing, there to expiate his crime.

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Dr. E. K. Kane.—The sympathies of the whole nation are at present excited in behalf of this gallant young navigator, who, in attempting to discover some relict of the long lost Franklin, it is feared, has himself perished in the same frigid region. Dr. Kane graduated in the University of Pennsylvania, in the spring of 1842. During our residence in Blockley Hospital, he was our room mate, associate and friend, and although at that time laboring under a serious organic disease of the heart, was distinguished for his devotion to medical science.

The Moustache.—A non-professional correspondent of the United Service Gazette, says: "I have lately seen in the two military journals, several letters, advocating the growth of the moustache for infantry regiments. I must go further, and suggest it to be worn by both army and navy, if it is possible to overcome our national prejudices. I advocate it from no foppish freak, but from a sanitary motive, as conducive to the health of all those who are exposed to the night dews and vicissitudes of climate. I advance these opinions in consequence of having been in an expedition where many were carried off by a malarial fever, caused by the land being irrigated, and sleeping under canvass. It was observed by the medical officers, that with those who wore the moustache, it assumed a less malignant type. I believe it was said that the hair on the lip protected the nostrils, and caused the air to be rarified before it reached the lungs; however, I do not feel competent to explain the exact cause of the action, but that they suffered less, I am sure, and I feel certain that what Providence gave for such a wise purpose, was never intended to be disturbed by Birmingham razors."

Vomiting during Pregnancy.—The tincture of Nux Vomica, in doses of four drops, every two hours, is recommended on the very highest authority, as an efficient remedy in the distressing and often obstinate vomiting, which sometimes occurs in the earlier months of pregnancy. It is worthy of trial.

Impotence.—Dr. Schulz details in the *Wiener Wochenschrift*, a number of cases of impotence, which he has treated successfully by means of electricity applied to the peripheric extremities of the nerves, on the glands, the dorsum penis, the scrotum, etc. One old gentleman, in particular, is mentioned, who had not had an erection for fifteen years, whose penis assumed a state of formidable turgescence under the discharges of Dr. Schulz' battery.

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Nocturnal Emissions.—The free use of powdered cubebs is alluded to, in a paper in the *Preuss Verein Zeitung*, by Dr. Deiters, as a very valuable remedy for the nocturnal emissions we meet with in cases of spermatorrhœa. We suggest a trial of this safe and simple drug under such circumstances. The same remedy is also highly extolled by him in incontinence of urine of children, whether caused by atony of the bladder or intestinal worms. We have recently succeeded in relieving the latter disease of many years standing, in a young lady, by the fluid extract of Uva Ursi—it doubtless depended on atony of the bladder.

Sore Nipples.—Dr. Bourdel, assistant professor at Montpellier, states in the *Gazette Médicale* of Toulouse, that for the last ten years he has used with advantage the simple tincture of benzoin in the soreness of the nipples occurring during lactation, whether the fissures were superficial or deep, large or small, recent or of long standing. The tincture is applied with a camel's hair brush, and forms a layer which protects the nipple from the contact of the air and clothing. The first application causes some pain. The child takes the breast without repugnance as soon as the liquid has dried. A cure may be anticipated in from three to twelve days.

New Journal.—The year 1855 has given birth to at least one new medical periodical, "The Medical Counselor," which is to be published weekly at Columbus, Ohio, under the editorial charge of R. Hills, M. D. It is handsomely done up—contains sixteen pages octavo, at two dollars a year. Success to the enterprise.

New Jersey Medical Reporter.—The last number of this enterprising journal is embellished with a fine steel engraving, giving a life-like picture of the late lamented Prof. N. Chapman. Such enterprise deserves to be rewarded by a liberal support on the part of the profession.

Dr. Beale.—We stated in our last issue, upon the authority of the telegraph reporters, that the Governor of Pennsylvania had pardoned this unfortunate individual. But it seems that such is not the case. Sorry for it.

Substitute for Quinine.—A physician at Martinique is said to have discovered a tree, the bark of which affords an alkaloid equal in value to quinine as an antiperiodic. The French government is investigating the subject.

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P. T. Barnum.—It seems that this notorious and unprincipled humbug munger, after boxing the compass of tom-foolery, is about to enter upon the broad and inviting field of medical quackery. A bill has been introduced into the New York Legislature to incorporate the aforesaid P. T. Barnum and others, into a Hydropathic Medical College with the power to confer the degree of Doctor of Medicine. This is a sphere of action exactly adapted to Barnum's genius, and as he is so well versed in the art of making fools of the public, we would suggest that the legislature also grant him the power to confer the degree of Ass, as well as that of M. D.

Medical Coroners.—The St. Louis Medical Society has memorialised the General Assembly of this State, in reference to the passage of a law, requiring that the office of coroner shall only be filled by an intelligent physician, and setting forth the propriety and necessity of such a law. As at present conducted, coroners' inquests are the merest farces that were ever enacted; yet there is but little hope of reform in the present unenlightened state of society.

Boston Medical and Surgical Journal.—The pressure of public duties devolving on Dr. Smith, the senior editor of this journal, as mayor of Boston, prevents him from devoting himself, as heretofore, to his duties as editor; he has therefore associated with him Dr. W. W. Morland and Francis Minot as co-editors. Several alterations are proposed by the new administration, which are designed to increase the value and interest of the journal. It has all along been one of our most valued exchanges.

A New Gum.—Dr. G. Shumard has discovered a new gum, which he calls Musquite, and which he thinks will become a valuable article of commerce as a substitute for Gum Arabic. It exudes in great abundance from a tree growing plentifully in Texas and New Mexico, and can therefore be furnished in inexhaustible quantities. Gum Arabic is used in immense quantities in the United States and commands a high price—the discovery of the Musquite may therefore prove important as an article of domestic trade. A specimen of it has been sent to Washington for the purpose of having its virtues tested.

Medical Students in Paris.—The number of medical students in Paris have considerably decreased the last two years. The number who matriculated in 1852, was 1,434, of whom 480 were new. In 1853, the number had decreased to 1,060, of whom only 284 were new; and the present year is only 964, of whom but 151 were new.

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Patriotic.—The Medical Association of Pennsylvania has contracted for a block of marble, to be placed in the Washington Monument at the Federal City. The design on the stone represents Hippocrates refusing the present sent him by the Persian King, Artaxerxes, and the invitation through his ambassador to come to Persia as his physician.

Western Lancet.—Dr. M. L. Lawson, long and favorably known as the able editor of the Western Lancet, has retired from its editorial department to give place to Dr. T. Wood, who is announced as editor and proprietor. The ability and enterprise of Dr. Wood, as well as the numerous and distinguished collaborators announced, give evidence that the Lancet will continue to maintain its high character.

Salaries of French Professors.—The Ministers of Public Instruction of Paris have raised the salaries of professors of medicine, from 6,000 to 7,000 francs. Even this is a small remuneration; it should be that many thousand dollars.

Suit for Mal-Practice—Novel result.—For several years past suits for mal-practice have been very common in some parts of the country, and especially in the New England States. A suit of this kind was recently brought in Boston, by one Thos. Rice against Dr. Thorndike for alledged mis-management and unnecessary amputation of the great toe, in which the damages were laid at five thousand dollars. After hearing the evidence on both sides and the argument of counsel, the jury promptly rendered a verdict of acquittal, and presented the defendant with the following—signed by each of the jurors.

"*Resolved*, That, in the opinion of this jury, Dr. Thorndike exercised the best skill and judgment in the surgical operation in question, and that he is entitled to the entire confidence of the community in the practice of his profession as a surgeon and physician." This was justice handsomely done.

Mortality in London.—During the year 1854, no fewer than 73,667 persons died in London, out of a population of two millions and a half; being 4,765 more than died during the disasterous cholera year of 1849.

A Hint to Recent Graduates.—The examinations for thirty assistant surgeons in the service of the East India Company, are now progressing. These fine appointments begin with a salary of $3,000 a year, which after a time is increased to $5,000. There is also a retiring pension. Yet, strange to say, for these thirty vacancies, there are only thirty-four candidates.

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THE ST. LOUIS

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PART I.—ORIGINAL COMMUNICATIONS.

Article I.

On the Pneumonia of Infants. By John B. Alexander, M. D., *of Lexington, Missouri.*

No organ in the human body is invested with greater pathological interest than the lungs. Developed into perfect structural maturity, though performing no function, during fœtal life, they assume a functional importance from the very commencement of extra-uterine existence, that is probably only equaled by that of the organs of circulation. Designed to supply the blood with gaseous nutriment, they enter at birth upon their important duty, which has to be performed, without cessation or interruption, throughout the whole life of the individual. Nor is this their only office. In addition to furnishing, in connection with the digestive organs, the nutrient material out of which the blood is formed, they constitute one of the largest and most important depurating organs of the whole system, eliminating from the blood matters whose deleterious presence, even for a short period, could not be tolerated with impunity. Entrusted thus with the important duty of guarding most jealously the purity of the blood, which is undoubtedly the grand basis of the health and well-being of every organ of the body, the lungs possess most assuredly an intense and profound interest to the pathological inquirer.

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Previous to the nineteenth century, much obscurity hung over the diseases of the respiratory organs; but since that time, and particularly in the last twenty years, a host of observers have been in the field, and large and valuable accessions have been made to our knowledge in this department of medicine. Bronchitis was at first distinguished from pneumonia, and the different varieties of pneumonia were severally traced out, until at last it was announced to the medical world that inflammation of large and continuous portions of lung or lobar pneumonia, was the disease of adults, and that it was never met with in the child; while lobular pneumonia, or inflammation attacking small circumscribed portions of lung, was that form of the disease peculiar to infants.

Medical men were at this time familiar with a form of condensation of the lung in new-born infants, which resulted from non-expansion of the vesicles, and unless of long continuance was capable of insufflation; it was in fact a mere morbid persistence of the fœtal condition. But the condensation of lobular pneumonia, although closely resembling it, was believed to be the effect alone of inflammatory action. Legendre and Baily, in their simple and memorable experiment of insufflation, demonstrated, however, that the so-called lobular pneumonia, like the atelectasis of the new-born, could be inflated, and therefore was not a *pneumonia*.

At this period, just ten years ago, many medical men, both in Great Britain and on the continent, were devoting their attention to this new and attractive pathological inquiry.—Startled by an announcement that unsettled what appeared the demonstrated facts of diseased action, they re-examined the subject, experimented for themselves, and from their united labors we are now in possession of the true facts and the explanations that may logically be deduced from them. These are that in the infant, and indeed much more frequently in the adult than was formerly supposed, a condensation of the lung may take place, presenting nearly all the physical signs of pneumonia, and yet not at all due to inflammation of the parenchyma of that organ.

These condensations are various in their extent and attendant circumstances, being sometimes simply a collapse of the cells

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of a few lobules; in other cases the collapse is more generalized; sometimes a considerable congestion accompanies the obliteration of the cellules, in others more or less secondary inflammatory action is met with; but in all, the antecedent condition producing these morbid appearances is inflammation of the bronchia, with a closure of minute bronchial tubes by the products of inflammation.

Nearly all the secondary asthenic pneumonias in the young subject as well as in the adult, are of this character—mere pulmonary collapse from bronchitis. The lung in this condition is violaceous in color, less voluminous than natural, tough, non-crepitant, presenting a smooth section with no granulations; this morbid appearance is sometimes bounded by the interlobular septa, but occasionally more diffused; and often it is confined to the anterior marginal portion of the lung, the pleura covering it being entirely healthy. Most frequently emphysema is found co-existing elsewhere, if the disease has existed some time.

Now there is probably no point in the whole field of pathological research more plainly made out than the existence, and indeed very frequent occurrence of this morbid condition, bronchitic collapse of the vesicles of the lungs; but a subject worthy of anxious inquiry by the medical practitioner here presents itself: is there then no true lobular pneumonia, no partial hepatization of the lung, even occasionally met with in children? No satisfactory reply as yet can be given to this question. Rilliet and Barther, it is true, describe a lobular congestion, that is invariably a consequence or an accompaniment of catarrh, in which they say the vesicles suffer collapse as a result of the congestion; but they contend at the same time for a true partial or primitive lobular hepatization, characterized by plastic effusion in the vesicles. Yet they admit that, under certain influences, "the active congestion with its effusions may assume a more inflammatory character, and evince a plastic tendency, so that true extra-vesicular hepatization may follow upon the lobular congestion."

Dr. West has met with patches of lung of a vivid red color, of small size, though not circumscribed by the margins of the lobules, which he regards as lobular pneumonia. More gene-

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rally, instead of this discrete form, the disease has been generalized by the confluence of these distinct portions. Other observers agree with these quoted, and some have occasionally met with small abscesses.

But, on the other hand, Dr. W. T. Gardiner maintains that the so-called lobular pneumonia has no connexion whatever with any ordinary type of inflammation or hepatization, but "that it has the closest possible analogy, if not identity, with the unexpanded lung of the infant just born." He has in fact very clearly demonstrated that occlusion either complete or partial of the bronchial tubes, attended with diminished constitutional vigor, and feeble inspiratory power, can and does give rise to this morbid condition under consideration, which the stethescope and the scalpel heretofore declared was pneumonia, but which clinical observation and experience all along hesitated to rank with that disease.

Lobar pneumonia, contrary to the assertions of many eminent writers, is undoubtedly a disease of early life, and presents in the infant no differences from pneumonia in the adult worthy of note, except those growing out of the general pathological peculiarities characterizing subjects of this tender age.

Vesicular bronchitis, capillary bronchitis, suffocative catarrh, and broncho-pneumonia, are terms that are applied to an intense and fearfully fatal form of bronchitis, in which the inflammation spreads to the minute bronchial tubes and vesicles, and results in the formation of false membrane and the abundant secretion of pus. Intense extra-vesicular congestion may attend this form of disease.

These various affections of the lung may occur as complications in the course of many other diseases; but croup, hooping cough, measles, scarlatina, and the disorders of dentition, stand pre-eminent in giving rise to them.

In infancy, we observe many peculiarities, both general and special, which serve to impress distinctive characteristics upon its diseases, and which deserve particular notice in studying the pathology of this period of life.

While in the adult, the inflammatory fever may be regarded as the exponent of the phlegmasia producing it, in the infant as with the aged the ratio is lost; infantile febrile re-action be-

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ing excessive compared with the lesion, while in the aged it is as remarkably feeble. Inflammations in the child seem to be deficient in that vigor and plastic tendency which mark those of the adult; they are more easily induced and run their course more rapidly; they cease, destroy life, or terminate in chronic disease, more hastily than similar affections in after years.

In reference to the lungs particularly, children are more susceptible to the action of the causes of disease of these organs, and a previous attack heightens that susceptibility more decidedly than with the adult. Throughout life we find that it is a law of inflammatory action in the bronchi, to extend downwards; yet the facility of this extension in childhood vastly exceeds that met with later in life. No one regards the minute bronchi, the vesicles, or the parenchyma of the lungs, seriously threatened in laryngitis or mild bronchitis, in an adult patient; but croup or catarrh in the young subject, every physician knows has to be sedulously watched on account of these rapid and fatal spreadings of the inflammatory process.

Pseudo-pneumonia or pulmonary collapse is a pathological condition of such extreme frequency, especially in the infant, that its symptoms become a subject of investigation of no little interest to the physician; but it would consume time unnecessarily to endeavor to trace out the various and diversified manifestations attending this disease. Attention to a few points in reference to its diagnosis, however, may not be inappropriate.

Keeping in view the signs of true pneumonia, we find that many of them are wanting in pulmonic condensation, and that also there are remarkable inconsistencies between the physical signs and the symptoms. The signs of condensation supervene upon bronchitis often suddenly, in cases marked by debility and prostration, without any rational evidence of the extension or aggravation of the inflammatory process. And the physical signs indeed are not those of true pneumonia; very rarely have we the fine crepitant râle of parenchymatous inflammation, but rather the sub-crepitant râle of bronchitis. The dyspnœa is altogether disproportionate to the solidity, which in pneumonia is generally the case; making the proper allowance always for any difference in the locality of the lesion.

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Pain may be regarded as highly characteristic of true pneumonia; in pseudo-pneumonia it is either wanting, or we have the soreness or the dull pain upon coughing, of bronchitis.

In pneumonia we have sputa invariably presenting peculiar and unmistakeable characters; viscid, semi-transparent, rusty, and often containing blood in some form or other. In the so-called lobular inflammation, expectoration is generally absent; its disappearance or suppression in the course of a bronchitis is indeed frequently an evidence of the supervention of this form of condensation. If expectoration be present at all, it is invariably bronchitic or catarrhal.

There is nothing peculiar in the nature of the cough, but along with the suppression of the expectoration the cough disappears also. The incessant or paroxysmal cough of bronchitis is generally replaced by a frequent, short and hacking cough, which is probably always indicative of inflammation of the smaller bronchia.

True lobar pneumonia in the infant, differs so little from the same disease in the adult, that its symptoms need not detain us.

It is not my design to enter minutely into the details of the treatment of a disease so infinitely various as that to which the term lobular pneumonia has been assigned, for it is a pathological condition that exists, as we have seen, in connection with almost every diversity of constitutional disturbance; that stands in genetic relation to bronchitic inflammation and obstruction of almost every intensity or grade; and that may vary in the circumstances attending the condensation or oppression of the cellules, from simple hypostasis to that of secondary inflammation, and indeed suppuration of the condensed lung.

Its correct treatment will naturally grow out of an apprehension of its true pathology, and an enlarged and comprehensive view of the case as afforded by all the symptoms, guided by a knowledge of the fact that solidity of the lung even with crepitant râle, under certain circumstances, by no means declares the existence of pneumonia.

If the views herein presented are true, we have in them a ready explanation of that sound practical precept of some of our best writers, that in certain cases of secondary inflamma-

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tion of the lungs in fever, stimulants cease to be stimulants and seem to exert an antiphlogistic power. Cases of this sort, and various other instances of lobular pneumonia, for a long time presented a paradox to the practitioner; the existence of fever, crepitating râle, dull percussion, bronchial breathing and voice in true pneumonia, were indications for the use of the lancet, antimony and mercury; while other cases presented themselves, in which many of the same signs were manifested, but in which experience taught the beneficial effects of a directly opposite treatment. In one case, the extension of the physical signs demanded a proportionate activity of treatment; in the other, it was only the sign of failure of constitutional strength and inspiratory power, and called imperatively for tonic and sustaining remedial effort.

In lobar pneumonia, more particularly in the primitive and sthenic forms, general blood-letting exerts the same control over the disease in infants, that it does in adults; but loss of blood with the child cannot always be borne with the same impunity; prostration is more easily induced, and grave nervous disturbances so readily spring up under this condition, that caution must be exercised in the employment of the lancet even in cases attended with a bold and vigorous re-action. The phlegmasia met with in a malarious region, bear and require in their treatment a smaller loss of blood than those in districts of a different character; so that in many parts of Missouri the mercurial is found more suitable than a more decidedly antiphlogistic plan with the lancet and antimony. Cupping, besides being scarcely applicable, appears much less valuable in infantile than in adult pneumonia. Leeches are less objectionable than cups.

Antimony is not, in my opinion, so efficient a remedy with children as with adults. Apart from its often fearfully depressant effect, it has so decided a tendency to induce muco-enteric disease, a most baffling and dangerous complication in the pneumonia of children, that often the practitioner is deprived of any aid at all from this, under other circumstances, most potent agent. Yet, in a communication received from Dr. Knode, he speaks of using it freely, with great benefit and without injurious results.

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Ipecacuanha, although not identical in therapeutic effect with tartar emetic, is often a remedy of great efficiency where the latter is inadmissible.

Mercury is probably the most uniformly valuable remedy, in this disease, that we possess. Calomel, combined with ipecacuanha, and given at regular intervals so as to produce its full constitutional effect, I have found to exert a controlling influence over pulmonic inflammation in infants, with more unerring certainty than in the same diseases in after life. Whether this is owing to the fact that the function of the liver in eliminating carbon, supplemental to that of the lungs, possesses an importance in the infantile economy, which in a great measure is afterwards lost, or is due to the diminished vigor and less plastic tendency of inflammations in children, it is impossible to say. It may probably be owing to both. In enteric complication the milder mercurials are more appropriate, and are found to be more beneficial than calomel.

Blisters in the young subject effect less than with the adult, and are often attended with peculiar dangers; not only do they frequently produce excessive inflammation, but the sympathetic disturbances they give rise to, are often so extensive and varied, that they should by no means be indiscriminately resorted to.

The various other remedies that experience has taught us may, in many cases, be brought to bear in subduing the disease itself, or any sympathetic or symptomatic manifestation, present no therapeutic peculiarities that need detain us.

Finally, it is with regret, that, in closing this imperfect attempt to cull and condense for this association the more valuable facts in relation to the pneumonia of infants, I am unable, through the denial of my professional brethren, to present to this body what I presume it asked at my hands, a report, statistical and otherwise, upon the disease as it prevails in Missouri, and containing a summary of the practical experience of her numerous and intelligent physicians.

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ARTICLE II.

Two Anomalous Cases in which Death probably resulted from Calculus. By E. S. LEMOINE, M. D., *of St. Louis.*

Dr. McPHEETERS.

Dear Sir: I enclose, for publication in your Journal, the following accounts of two cases, which, at the time of their occurrence, were presented to the St. Louis Medical Society—the second one with the morbid specimen. They present points of interest, which, I think, render them worthy of more public record, and they can well appear together from the circumstance that death in both instances was probably owing to the presence of calculus.

Yours, truly,

E. S. LEMOINE.

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The first case was that of a mulatto boy, Wm. F., aged about three years, whom I was called to see on the first of March, 1854. He was evidently dying—no pulse at the wrist, and skin cold, clammy and shrunken, as in collapse. He seemed to be in great pain, which recurred spasmodically—causing him to writhe and twist his body from side to side, contort his features and clench his teeth. The muscles of the limbs were not affected. Careful pressure on the abdomen, the spine, and other parts of the body, evinced no tenderness; nor did he complain, and only spoke to beg for water. The prepuce was much elongated by pulling with the fingers, and the skin between the thighs was excoriated, as if from the dribbling of urine. No other symptoms appeared.

He had continued in his usual health until two days previously, when he began to droop and appeared unusually quiet. On the day before he had eaten a hearty breakfast, but at dinner time declined eating, though very thirsty. Up to this time there was no apparent derangement of bowels or other organs, and no fever; but this morning, after a restless, though not sleepless night, he had a copious, very fluid and light colored discharge from the bowels, which was soon followed by a "spasm"—then another operation and another spasm. I was

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here called in and found him as described. He died very shortly after. I did not see the evacuations. He voided his urine in the usual quantity an hour or two before his death.

A partial and hurried post-mortem examination, kindly conducted by Dr. G. S. Walker, revealed no lesion to which the death could be ascribed. A small, bean-shaped *calculus* was found in the right kidney, which latter, however, was free from any evidences of irritation or other diseases—and so also were the bladder and ureters. Death, most probably, was immediately owing to spinal irritation. At the time, the symptoms were attributed to the passage of calculus along one of the ureters. The case was mainly interesting from the previous history of the child. About eight months before, in Cincinnati, he had been placed in charge of the persons with whom I found him; having been deserted by his mother, a white woman. His father was a colored man. His appearance was then delicate; abdomen protuberant; appetite craving and thirst extraordinary—drinking at times as much as a *quart* of water. Nothing else unusual appeared. Though generally quiet, he would readily join in play with other children. It was, however, soon noticed that his habits were disgustingly filthy– greedily devouring, even after a full meal, every kind of offal and filth, including his *own* fecal and urinary excrement and that of *others*. He would slily drink from the gutter and eat from the offal-pile immediately after eating heartily, at the table, of the ordinary kinds of food. These habits and propensities continued during the time he was under the care of his present guardians—about eight months—without any apparent effect upon his health. His bowels remained healthy—and he was never known to vomit or evince nausea—whilst the more agreeable odors appeared to be as pleasing to him as to others.

A month or so before his death, after removing to St. Louis, he began to be more quiet in habit, was at times feverish, and was frequently observed to be pulling at the prepuce. He would urinate, however, as in health, and in other respects his habits were as before.

In the other case mentioned, the morbid specimen presented to the society was removed on the 27th of April, 1854, from a

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boy, aged between three and four years, and consisted of the bladder with both kidneys attached by means of the ureters. A calculus was also presented, taken from the bladder after death. It was large, oblong, round—its long diameter $6\frac{1}{10}$ inches, its short diameters $9\frac{7}{10}$ of an inch respectively, of the mulberry variety, though only slightly rough, and coated at the extremities with ammonio-phosphatic deposit. The coats of the bladder were thickened and contracted, with evidences of chronic inflammation in the lining membrane—the amount of urine found within was small and loaded with mucus, though several ounces were observed to flow from the urethra previous to using the knife. The left ureter was somewhat enlarged and inflamed—the right one was very much enlarged, and, about three inches from the kidney, was bifurcated, its two branches entering a single pelvis by distinct orifices about half an inch apart. Both kidneys had been inflamed, and were noduled from the backward pressure of the urine, and in both there was purulent infiltration. The peritoneum also, by adhesions and injections, gave evidences of previous and general inflammation.

It was briefly stated to the society, that the boy had been generally unhealthy from early infancy; that about eighteen months prior to his death, I had extracted a small irregular calculus from the urethral fossa near the meatus; and that the patient afterwards enjoyed tolerable health until the fall of 1853, when he was treated for cystitis, with entire, though only temporary relief, followed during the winter by the same symptoms conjoined with those of nephritis. The urine was usually loaded with mucus, and, at times, with pus, and under the microscope occasionally exhibited oxalate crystals. The bladder was carefully sounded but no stone found. The case progressed under the usual treatment for such affections, modified as occasion required, and attended with alternations of relief and renewed suffering until April. The bladder was explored twice during this period and with like result as in the first instance—the third trial being made with great care, as there was now additional reason to suspect the presence of calculus, in the fact that the little sufferer would cry to lie in his crib, on his back, when wishing to void his urine. This he

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could then do with comparative ease, whilst the attempt in the erect position was attended with much pain, a few drops only discharging. Frequent attempts were, at this period, made to secure a sufficient quantity of urine for examination, but without success, as he would only discharge it into a cloth and when covered, and would allow no one to be near him at the moment. The symptoms becoming more urgent, Dr. C. A. Pope was requested to examine the bladder, which he carefully did, without however detecting stone. Dr. Pope thought the case one of chronic cystitis, the kidneys also probably involved. Another examination was, however, determined on; but about ten days after, I was hurriedly summoned to see him, and, on arrival, found him dead. The mother stated that for several days previously he had refused all food—that the symptoms remained the same, and that he was dressed as usual that morning, but complained suddenly of pain in the abdomen, and died with "something like a spasm."

As to the immediate cause of death in this case, there were lesions sufficient to have produced such an issue long before—but from its suddenness, attendant probably with convulsion, and from the condition of the kidneys, so diseased as to be almost incapable of secretion, it is more probable that the result was immediately owing to *anuria*. The elements of the urine must have accumulated in the blood to a large amount.

The chief points of interest in the case, are the greatly *enlarged ureter*, so as to hold *four or five ounces*, and its *bifurcation*, an anomaly very infrequent; also the circumstance that so large a stone could not be detected, though explorations were repeatedly and carefully made, by sounding and per rectum. For this I am unable to account. The stone was not encysted, and its being thickly coated with mucus scarcely removes the difficulty. Thus another is added to the "very rare" cases in which the existence of stone in the bladder, though indicated by the strongest rational evidence, could not be demonstrated by the use of the sound, carefully repeated. Are such instances really so rare as supposed? Would not sectio cadaveris, if more frequently resorted to in cases of obstinate chronic cystitis, of long continuance, where the sound had failed to detect stone, show that such opinion is erroneous?

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and if not so unfrequent, should the rule "not to operate until the stone is positively felt by the sound, whatever may be the other evidences of its existence," remain as absolute as at present?

Article III.

Case of Perpura Hemorrhagica. Reported by H. Christopher, M. D., *of St. Louis.*

M. Page, aged twenty-four years, large frame, about six feet high, light hair, blue eyes, and of temperate habits. Some of the female members of his family have died of phthisis. Has had Panama fever twice, occurring about a month after his return to the States—was considered of a weak constitution by his friends. Returned to this city last fall, since which time he had had frequent spells of slight fever or chills and fever, for which, however, he would prescribe for himself. Was taken with a chill on Sunday, the 11th of February, and took quinine and blue mass. I saw him on Tuesday about noon; bowels constipated; had not been moved by the blue pill; tongue but slightly furred. No pain in the head, chest, or bowels; slight pain in the loins and lower extremities. Gave him three compound cathartic pills.

Wednesday, 14th. High fever, pulse full, pain in the back severe, eyes a little red; no pain in the head, nor over the liver or stomach; urine slightly red, bowels moved. Ordered hydr. chl. mit. grs. x, ipecac. i, every six hours, to be followed by oil at night.

9 o'clock, P. M. Profuse bilious evacuations; pulse much reduced in fulness and frequency; pain still severe in the back. Observed a flush over the face, neck and chest, but supposed it to be simply the flush of fever—other symptoms as before; suffused eyes. No prescription for the night.

Thursday, 15th. Eyes red; face, neck, chest, arms and hands of a deep red color; not much fever; pain in the back not quite so severe, but had shifted higher up; tenderness on percussion over the liver; urine scanty but not very high colored.

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The erythema spread over the body and lower extremities, but less marked. A mercurial odor being on the breath, he was ordered only castor oil.

Noon. Complaining more of the pain in the back, he was ordered to be freely cupped along the spine and over the liver, which gave him relief. Eyes as before, erythema more livid; the skin dry but not rough, and yielding a white spot on pressure; no sore throat; fever a little higher.

6 o'clock, P. M. Almost entirely free from pain; rested well; oil had moved the bowels four or five times; pulse abated to 96; eyes and erythema over the body as before; tongue moist and coated. During the latter part of the night was restless and wakeful, for which took morphia, sulph. gr. $\frac{1}{8}$ every hour till sleep was procured.

Friday, 16th. Took three doses of morphia, after which rested well. Pulse not very frequent and with little fever; urine color of white whisky; eyes red as before; no headache; erysipelas on the face—marked by its peculiar feeling, but without the line of demarkation as in ordinary cases. Erythema over neck, arms and hands, and body, as before; tongue moist and coated white. No evacuation from the bowels. Ordered quiniæ sulph. grs. 2, Ext. hyosciamus $1\frac{1}{4}$ grs. every two hours, with nourishing diet. Noon. Doing well.

6 o'clock, P. M. Improved. Pulse good; eruption as before; bowels moved by oil. A few purple spots noticed on the arms and chest.

Saturday, 17th. Rested badly during the night; respiration accelerated; pulse 96; tongue dry in appearance—distinctly typhoid; sordes on the lips: expression of countenance anxious; slight delirium at times, but sensible when spoken to or aroused; no headache; hemorrhage from the nose; eyes and eruption as before; no motion of the bowels. Ordered carbonate of ammonia 2 grs. every hour and nourishing diet. Purple spots more numerous, with a disposition to hiccup. Blister over the stomach.

4 o'clock, P. M. Requested Dr. Linton to see the case with me. Only marked change was, that the purple spots were more numerous, and abdomen and inferior extremities thickly studded with small scarlet spots interspersed with the purple.

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The erysipelatous character of the eruption mostly disappeared from the face. Pulse 100; urine suppressed, or rather none since the night before. No headache—had never complained of headache. The upper part of the forehead was thickly studded with minute purple spots—the face was more livid; bowels not moved; hiccup almost abated. The blister applied (6x10) did not draw—some blood mixed with the saliva. Prescriptions continued with port wine.

Sunday, 18th. Evidently sinking; pulse 96, and feeble; tongue very dry and more sordes, and delirium increased; no motion of the bowels from the oil; no urine. Symptoms as before. Rested badly during the night.

11 o'clock, A. M. Dr. Linton present. No change for the better; continued stimulants with gin.

At 2 o'clock, P. M., he commenced to fail more rapidly, and when I saw him at 4½ o'clock he was moribund and died shortly after.

Article IV.

Letter from our Colleague, Dr. Linton, *who is on a visit to the South for the benefit of his health.*

St. Charles Hotel, New Orleans,
March 21, 1855.

Dear Doctor:—You have more than once requested me, during my peregrination, to note something for the Medical Journal. I shall now, for the first time, comply with your request.

As you know (or if you are not aware of the fact I now inform you thereof), I put my microscope into my trunk on leaving home, and I propose furnishing you with the results of an observation therewith thus far; I am on a sort of microscopico-geological tour, and you shall hear from me again. First, of the microscope. Reasoning from analogy, I was led to doubt all the classification of substances hitherto made. I knew that so far as cancers were concerned, the greatest mistakes had been made by Velpeau, and indeed all other sur-

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geons. They took things for cancer which were nothing of the sort—so, also, of other morbid products—all classifications up to the time of Lebert and Robin are clearly of no account. A thing must be examined by the microscope before it can be known what it is. This being granted, (and nothing is better established,) I very naturally asked myself whether or not we were not in error as regards the most common objects of our sensations. Casting my eye over the dinner table I saw various articles with which I used to think I was perfectly familiar, but I was now in in a state of philosophical scepticism—I was a second *Sextus empiricus*. I resolved, as did *Descartes*, to commence my philosophy *de novo*, and to believe nothing until proved to be true by the microscope. I resolved to commence with the commonest objects. Corn bread was first submitted to the test, and what was my astonishment to discover that it was no bread at all! I shall not here enter into its constituents, but as I shall hereafter prove to you what we here called corn bread, is an indefinite mass, which might provisionally be called *panoid*, but which no microscopist will ever again call *bread*.

The next thing to which I devoted myself was an Irish potato. You know what I mean. You will, doubtless, smile and shake your head when I inform you that this turned out to be nothing but an artichoke. I felt at this discovery all the joy that Robert felt when he found that Velpeau's *cancer* was but an epithelioma, and I ate the rest of the potato in very transport—I mean artichoke, not potato. Old fogies, and those in general, who believe what their mammas told them and lag behind the times, will doubtless oppose me. The beef I found to be, in part, fibrine, and owing to the shaking of the boat I could not well determine what it was. However, I am certain that it is not real beef—it may be mutton, or venison; but, as I have intimated, I shall leave off deciding this point until I shall have made further inquiries and investigations.

The only article of food which stood the test of my examination was the oyster. I was overjoyed to find what I have believed on *a priori* reasoning, that an oyster is nothing else but an oyster—mankind has intuitively given them the right name. Science will, perhaps, never raise a doubt on this subject.

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What a change will have to be made in our geography in a few years. The counties and States are all laid out in an old fogyish and empirical way. Such a division will never stand the test of the microscope. I shall move at the next Session of the Legislature of Missouri, to have a microscopical survey made along with the geological one, to settle our lines. A few facts will explain all. Just above *New Madrid* I went ashore and found a petrifaction in what they call the alluvium. The rock had evidently been very recently formed—I examined a fragment of it under the microscope, when lo! and behold! it turned out to be a part of Arkansas. Now, it could not have been washed from Arkansas, for Arkansas is down stream; so that evidently the town of New Madrid is in Arkansas and not in Missouri. I also discovered that many of the county lines along the river are wrong. It always appeared to me, that Choctaw county, Mississippi, was not all one county—it seemed unreasonable, when *States* are sometimes so small as Rhode Island and some others. Choctaw county, as represented by the enemies of progress, extends from a few miles below Memphis, to some distance below the mouth of the Arkansas river. This is unreasonable—it bears its own refutation on its face—a county two hundred miles long! what an imposition on human credulity; Sir, I had almost said it was knavish thus to impose on frail mortals; for, even reason without the microscope should have been sufficient to stamp the thing as a fraud and an outrage. I believe that there are not less than four or five counties in the so-called *Choctaw*. Microscopic examinations of the soil show that the upper part is *Chickasaw*, and that the lower part, whatever else it may be, is not *Choctaw*. Did not the vast range of pathology, formerly called cancer, turn out to be of at least four different growths? So I say with this enormous misnomer of Choctaw county. I have an idea that I shall proceed to Cuba for the purpose of ascertaining if it be true that the whole island has been formed by the mud washed down by the Mississippi—for in such case the island belongs to the United States.

Yours,

M. L. L.

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Article V.

Case of Stone, with the High and Lateral Operation, performed by Dr. C. A. Pope, *Professor of Surgery in St. Louis Medical College. Reported by* E. H. Gregory, M. D.

Eli Dunn, aged twenty-three years, presented himself at the Sisters' Hospital, March 15th, for what he called gravel. We thought proper to sound him, and immediately upon the introduction of an instrument it struck upon what we took, after a little manipulation, to be a very large stone; our suspicions were still further confirmed by examination, per rectum; in fact the mass seemed to fill the pelvis. The man had been afflicted since his earliest recollection with urinary trouble, and for three years had been conscious of the existence of stone; his constitution, originally rather delicate, was now much worn by disease.

Dr. Pope, after a careful exploration of the case, deemed the high operation proper, and accordingly proceeding on the 17th to make the necessary incisions, soon succeeded in removing a considerable part of the calculus; and yet, by far the larger proportion remained fixed deeply in the pelvis, notwithstanding the most ingenious efforts to dislodge it. The mass was accurately moulded to an irregular bladder and seemed firmly impacted between the neighboring bones. Every method which skill and ingenuity could devise was put in requisition without success. Whereupon Dr. Pope determined to perform the lateral operation, and he thus succeeded in removing a stone weighing six ounces, not however without much difficulty. But by a process of crushing, scooping and washing—the manœuvering below being materially assisted by manipulations above the pubis—the last fragment was removed from the rough and extensively ulcerated bladder.

After the patient was carried to his bed and placed upon his left side, he expressed himself comfortable. The pulse was good, rather better than between the first and second operations. Anodyne was ordered.

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Saw patient again in six hours, found he had slept, re-action moderate, no suffering except slight pain in the high cut. Anodyne repeated during the night.

Following morning, March 19th, patient seemed comfortable, countenance seemed calm and confident, and he spoke rather hopefully; pulse full, not frequent, with some little increase of strength; skin warm, no tenderness of abdomen, no complaint except slight soreness in the immediate vicinity of the upper wound. Lest the re-action might increase unduly, we ordered a minute quantity of tart. antimony with morphine, every three hours, and its influence to be watched.

The morning of the 20th, we learned the excitement had not increased as was anticipated, the re-action seemed barely sustained, yet there were no marked indications of prostration. During the day, however, the powers began to decline, and he died the following morning at 10 o'clock.

Post mortem.—Incisions well placed; bladder extensively ulcerated; kidneys healthy; peritoneum untouched, with no indications of inflammation; slight infiltration immediately to the left of the high wound. Pathological appearances insufficient to account for the death—probably resulted from shock of operation.

Remarks.—If we are to cut for stone, certainly the lateral operation or some one of its modifications is to be selected, if there be no obstacle to its performance. In the case we have detailed, Dr. Pope very properly chose the high cut, in consequence of the immense size of the stone, but being thwarted in his design, he determined, not however without due consideration, to have recourse to the lateral incisions, believing, as he did, that the additional operation would materially facilitate the procedure; that less harm would result from its performance than might follow persistant and perhaps ultimately unavailing efforts to accomplish his purpose above the pubis, and that much would be gained by affording a free exit to the urine—thus diminishing the ill consequences of subsequent infiltration. In short, the first operation was performed for the best of all reasons, viz: the probable impossibility of abstracting the stone through the outlet of the pelvis; and the

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second, because the first failed to accomplish the desired end; nor do we believe either operation alone would have sufficed.

☞ Since writing the above, we have witnessed another operation for stone by Dr. Pope—three calculi were removed and the wound united by "*first intention*," all the urine passing through the natural way after twelve or fifteen hours, and the patient walking about quite well at the end of five days. We will add, that Dr. Pope cut this patient two years ago and removed a single stone, there being no evidence at that time of the existence of another; the calculi were phosphotic.

Article VI.

Life. By J. H. Watters, M. D., *of St. Louis.*

[Continued from page 298, Vol. xii.]

No. VI.—The proposition was stated in the last article, that oxydation is the first action when an organism is placed under the influence of the external conditions of life, and that the special vital actions are reciprocal with oxydation. It has been maintained, that actions can be modified with uniformity and law under two conditions only, viz., either as directed by a voluntary intelligent power directly, or as directed by mechanism. That mechanism, and not an intelligent voluntary power, is the special condition of the vital actions, I consider sufficiently established. As there is no efficient power in mechanism, its actions must be reciprocal with somewhat anterior. According to our view, therefore, the cause of action and the cause of the special modification of action, are no more one and the same than in any machine of art. If mechanism, or the special arrangement of the physical agents in an organism, is the cause of the *speciality* of the vital actions, then it is this that accomplishes what has been supposed to be the office of a "vital principle," "vital force," or of some imaginary something. We have seen that those who assume a special vital force (either as a metamorphosed form of the physical forces, or as an inherent property of matter to be developed by organization) to explain the special vital actions, are espe-

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cially unphilosophic, because they assume their "vital force" to explain what can only be explained by the direct agency of an intelligent efficient power, or by mechanism. Unless, therefore, they endow their "vital force" with intelligence and voluntary power, (which they do not do), the speciality of the vital actions must still depend upon mechanism. But it was to explain this speciality of action they assume the peculiar force.

The inventive genius of man has contrived numberless mechanisms or arrangements of physical agents, which, by their regular, fixed and necessitated action, are continually accomplishing his objects without his direct agency. If we examine this machinery, we find that with a few physical forces as motors, an endless variety of action is obtained. The action is reciprocal with an antecedent or motor; the *variety* of action is due to the machinery. We call that the physical force or motor which is immediately antecedent to the actions of the special machine, and upon which these actions depend. And let it be observed that, so far as the philosophy of the actions of any piece of machinery is concerned, we need not speculate about the antecedent of this motor upon which it depends and with which its actions are reciprocal. Now, a machine of art will perform its specific actions whether the motor be steam, or a water fall, or any thing else; hence, in studying the specific actions, attention should be directed to the arrangement which modifies the action and not to specific forces. If the cause of the specific actions in a living organism be the special arrangement of physical agents, it is apparent that attention should be directed to this, and not to specific forces. And as steam may be the motor of any variety of machinery, so oxydation *may* be the antecedent to the vital actions with which these actions are reciprocal, though directly opposite in direction. Oxydation is antecedent to steam power, yet the *direction* of action in oxydation does not in the least resemble the direction of action in a steam engine; and if the speciality of the vital actions depends upon mechanism, it would not be expected that the direction of the antecedent or "motor" would correspond to the direction of the vital actions. The proposition that the vital actions are

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reciprocal with oxydation, is thus shown not to be absurd at least by reference to machines of art, and this reference is just if the speciality of the vital actions depend upon mechanism. The *direction* of the motor of the machinery in a large factory, does not correspond to the direction of action in the various pieces of machinery—the actions of the machinery are reciprocal with the motor, but the *direction* of these actions depends upon the mechanism. So in the living organism, we are not to assume special motors or "vital forces" the direction of whose action shall correspond to the vital actions, as the *direction* of the vital actions depends upon mechanism, or the physical conditions under which they take place.

Much skill and ingenuity has been spent in the attempt to reduce the vital phenomena to chemical and physical laws; but the failure of this attempt is due, I imagine, to the method employed and not to the impossibility of the task. The vital phenomena are not to be reduced to our present *notions* of the chemical laws, but our notions of the chemical laws are to be expanded till they shall embrace the vital phenomena. There is a vast difference between these two methods. The laws of chemistry may be far more comprehensive than our knowledge at present. The want of an appreciation of this possibility has led to two classes of philosophers. Those of the one class attempt to squeeze the vital phenomena within the narrow confines of their own making; those of the other, seeing that they cannot do this, but never doubting the legitimacy of such boundaries, contend that the vital actions are altogether outside the pale of chemistry and physics. Thus both classes seem to take it as a thing granted, that the pale of chemistry and physics is identical with the pale of our knowledge of these subjects. In the present article, I propose considering a few facts and phenomena of chemistry without reference to the prevailing interpretation of them, and expect by these to render the proposition somewhat plausible that the vital actions are reciprocal with oxydation.

It is a fact universally observed and admitted, that one chemical action affords conditions under which other chemical actions take place. The bearing of this class of facts upon the question of chemical forces, as inherent properties of matter,

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has already been considered. Having concluded that efficient force or absolute power is not a *property* of physical agents, I wish now to trace the order of sequences in which actions take place in the machinery of nature, and the manner in which it is modified by different combinations of parts. It may be thought that I loose sight of the *cause of action*, when I commence here with action and deny efficient force to matter and to all physical agents. We have nothing to do with efficient forces here, but with physical antecedents and consequents. Action in physical nature exists as a fact to start with, and I imagine you would find it as difficult to account for a loss of this physical power once existing, as to account for its origin; but in studying physical nature we have nothing to do with either of these questions, but with the character and causes of the various *modifications* of action. We know that an indefinite variety of machinery may have a water fall as the prime motor. Now the study of the various modifications of action according to the different modifications of parts in the machinery, and the relation of the actions of each part to the prime motor with which they are reciprocal, is altogether separate from the study of the cause of the water fall. And it is of no trifling importance in the commencement of this study to be well assured of the fact, that the action of each wheel is not due to an inherent power, but to the antecedent motor with which it is reciprocal. Being now well assured of the fact that the *speciality* of the vital actions is not due to absolute power but to mechanism, we start with the *fact* that the "natural tendency" of organic matter, when under the influence of air, heat and moisture, is to oxydation; just as the machinist starts with the fact that the "natural tendency" of water is to seek its level. No one, who has read the previous articles, will suppose that I imagine that oxydation itself is due to absolute power more than the vital actions themselves; but I merely start with oxydation as one link in the endless chain of sequences, and wish to study the relation and connection of the special vital actions to this antecedent. If the chemical actions be not due to absolute power directly, every such action must be reciprocal with somewhat antecedent. I think it has been established that the physical agents have no

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power of *originating* action: and we get a glimpse of the universal law embracing both inorganic and organic nature, in the proposition that any particular chemical action which we may be considering, is but a link in the endless chain of sequences inseparably connected with equivalent antecedents and consequents—that the speciality of this particular action is due to the speciality of this particular part of the machinery of nature.

In commencing with elementary substances, we observe first, a remarkable correspondence between the relation of these, respectively, to heat, and their relation to each other, as manifested in chemical combination. But the relation is no less remarkable between the specific weights of gases, and their combining weights. But the specific weights of gases, or the amount of matter in a given space, depends upon their respective relations to heat, or to the agent, whatever it may be, which separates the particles and preserves the elastic form. Hence it would seem that the chemical relations of elements depend in some way upon their relations to heat. But again, in the chemical union of elements, heat, or electricity, or both, are manifested externally to the substances undergoing chemical action. If we now turn attention to the *amount* of heat and electricity manifested externally in chemical action, a remarkable relation will be observed. In the union of a given amount of any one element, say oxygen, with the respective amounts of different other elements according to their combining equivalents, the same amount of heat is set free, or the amounts will be a multiple or submultiple of each other. The same is true in the union of an acid with different bases. The same remarkable relation is observed in the amount of electricity developed. But if heat and electricity be inert and have a definite relation to the different elements of matter, the disequilibrium thus produced must be followed by definite effects or sequences. Heat and electricity do produce definite effects. The electricity developed in the oxydation of an equivalent of zinc in the battery, will *de*-oxydize an equivalent of water or other electrolyte. Hence, we see that the deoxydation of the electrolyte is reciprocal with oxydation in the battery through electricity. Thus we are able to discover the law of reciprocal

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action and re-action in the simplest phenomena of chemistry. But in these rudimentary facts, we are also able easily to recognize mechanism as the cause of the modification of action, in the relation that is here seen to exist between the "dynamic agents" and the different kinds of matter, corresponding to their combining equivalents. I use the word mechanism in contra-distinction from absolute force—the two only conceivable means of modifying action. From these facts we recognize the law that any particular chemical action is reciprocal with somewhat anterior, through the "dynamic agents," which are changed in relative quantities by such antecedents. With this view of the subject, the mind is directed from the useless notion of distinct forces with their specific differences, in accounting for the varied phenomena of nature, and is directed to distinct mechanisms,—to the reciprocal relation of phenomena or actions rather than to the metamorphosis of forces, which is involved in so many absurdities. And it may be observed here that a "material substratum" capable of converting heat into electricity, or electricity into light, or any one of these into chemical affinity or life force, upon the correlation theory, might be sufficient to modify the actions themselves; if the organism, for instance, be capable of converting heat into a "peculiar vital force" through its physical arrangement, this special physical arrangement would be sufficient to account for the special vital actions without the necessity of a peculiar vital force. The point at which I have been driving may now be clearly understood. In the first article, I undertook to prove that the ordinary chemical actions are not due to forces inherent in the matter—that these actions are directly due to a disequilibrium in physical agents separable and distinct from the matter, which are subject to variation in relative quantities according to fixed laws. These I called "dynamic agents," not that they are endowed with effective force more than matter, but that the chemical actions are directly due to their modifications in relative quantities. One chemical action is thus reciprocal with another through the dynamic agents which are thus changed in relative quantities. According to this view, heat, light and electricity are not convertible one into the other, but their phenomena are reciprocal, because

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their changes in relative quantities must be reciprocal. If we were now to consider those phenomena upon which the "correlation theory" rests, I think it would be observed that these very phenomena go far to establish the theory here advocated, rather than the metamorphosis of heat, light, electricity, chemical affinity, vital force, &c., into each other. I will leave the reader to consider for himself these two theories in reference to the facts adduced by Prof. Grove and others in favor of the correlation theory.

As we pass from the simplest chemical phenomena to those more complex, we find increasing evidence that the modifications of chemical action depend upon modifications of the dynamic agents in relative quantities, and that, as the change of the dynamic agents in a given space must be accompanied with a corresponding change elsewhere, every action must have an equivalent antecedent and consequent, and consequently, that the modifications depend upon mechanism and not upon absolute power. Chemical phenomena are but special manifestations of a disequilibrium of the dynamic agents. The chemical compound possesses chemical relations altogether different from those of its constituents, but the chemical relations of a compound, as of elements, correspond with its relations to the dynamic agents. If we consider the oxyds, for instance, we find that the lower oxyds are *bases* while the higher are *acids*. The fact has already been alluded to that there is a close relation between the amounts of heat *given out* in the union of a given amount of oxygen with other substances. This shows that the protoxyds have a corresponding relation to the dynamic agents. The same thing is shown by the fact that the electricity developed in the oxydation of an equivalent of one metal, will decompose an equivalent of the oxyd of any other metal. Hence we infer that these compounds agree in chemical relations, because they agree in their relations to the dynamic agents. The same inference is to be drawn in regard to the cause of the agreement of acids in their chemical relations. If we consider the compounds of oxygen and iron, for instance, we find that the protoxyd (Fe O) has nothing in common in its chemical relations either with iron or oxygen, but corresponds with the protoxyds of

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other metals; the compound $Fe\frac{3}{2}$ is acid, and consequently, differs entirely in its chemical relations from Fe 0, but corresponds with the higher oxyds of other elements. Now, as it is found by experiments, that, in the formation of the protoxyds of different elements, there is a corresponding change in the relative amounts of the dynamic agents, so we have every reason to believe there is a definite change in the formation of the higher oxyds or acids. Hence, as corresponding compounds agree in chemical relations, we have this further reason to infer that the chemical relations of a compound depend upon its relations to the dynamic agents. If this be true we can see clearly how one chemical action is reciprocal with another. This view of the subject seems so clear to me that it appears superfluous to insist upon it. It is indicated by every chemical phenomenon—by every condition which affects chemical action. It seems to me, that every variety of chemical phenomena revolves around this as its central law. Not that there is not some other law around which this revolves, as there may be some other centre around which the sun revolves. As the moon revolves around the earth, and the earth and other planets around the sun, and perhaps the sun around some other centre; so we first generalize a few facts, these again will form a class of a more comprehensive generalization, and this again will form but a class of one more comprehensive, and so on indefinitely till all is included at last in the Absolute, which is the ultimate great central law of nature.

Perhaps you deem this view of the subject quite too mechanical (!) Are you not still offering sacrifices to images? Too mechanical! Perhaps it is so, and I deceive myself. But upon what do you base this objection? Is it a sacred instinct or divine oracle you have received direct from heaven? Or is it not rather an old tradition to which your oblation is offered? The propositions I have been advocating are not necessary truths; but they are not necessarily erroneous because contrary to the faith in which you have been educated. Think of this, and consider the matter free from prejudice. It is most true, that one may be led into error as well by his own imagination as by the imagination of others received traditionally.

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You may suppose that I am deceived by the former, while I think you are by the latter. Individual thought is the only legitimate umpire in this question. If you are not an entire panttheist, you must admit *second causes;* if you admit second causes, you must admit they are necessitated, for voluntary power and second causes are philosophically incompatible; if necessitated, then the direction of action must depend upon mechanism whether we understand the principle of this mechanism or not. The earth revolved upon its axis quite as well when we supposed it stood still. Nature cares very little for our interpretations. The grain of corn does not inquire who put it in the soil,—whether the child or the philosopher. But you may say, though the physical agents are necessitated, and, consequently, the modifications of the direction of action depend upon mechanism, yet might they not be endowed with necessitated efficient power as an inherent property. Without entering here into this metaphysical question as to the *possibility*, I have already attempted to show that such *is not* the case in the present order of things, and all I need say here is, such a supposition is not necessary. But you say whence the incessant action in physical nature? I answer, whence a cessation of action, if the machinery of nature or the physical agents be indeed really and absolutely inert. The machines of art for their continued action require a continued antecedent, but for the same reason there is necessarily a continued equivalent consequent; but taking *nature* as a whole, upon what does it "rub," or to what does it communicate action that it may be carried out of the vast machinery of the universe? There is no last link in a circular chain; where is the last sequence in the actions of nature? Any particular chemical action is but one link in the chain of sequences, having an equivalent antecedent and consequent,—the speciality depending upon mechanism. This particular action may be all that is in the field of our vision, but action neither has its beginning nor termination *in this*, more than nature has its beginning and termination in our particular horizon.

Let it be distinctly understood that the object of the present article is not to *prove* that the vital actions are reciprocal with oxydation, but rather to show that this view of the subject

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accords with the facts of chemistry, or in other words, to show that this would be but an exemplification of a universal law of chemical action. If I have succeeded in making this as clear to others as it seems to me, the rest of my task will be comparatively easy. We will now attempt to establish that this *is* the law of life from vital phenomena. In the next article, attention will be directed to the conditions of life, and to the direct influence of these conditions.

Article VII.

On Vomiting During Pregnancy. By M. M. Pallen, M. D., *Prof. of Obstetrics, &c., in the St. Louis Medical College.*

Vomiting during pregnancy is most usually a harmless malady. About the fourth or sixth week, the stomach becomes deranged, and in the morning the lady makes efforts to vomit, or vomits sufficiently to evacuate the stomach. After some little time the feeling of discomfort passes off, and she is as well as usual. These attacks are renewed every morning for a period, varying from six to nine weeks, and then gradually subside. Some do not vomit at all—some vomit during the last months of pregnancy, and some suffer in this way in the first months or latter months, during the night only.

It sometimes happens, however, that vomiting during pregnancy is a most serious malady, and terminates fatally. In a discussion in the *Academie de Medicine*, Dubois stated that in the course of thirteen years, he had met with twenty fatal cases. Professor Stoltz, of Strasburg, states that of four cases which came under his notice, three died.

A fatal case of vomiting in pregnancy was lately reported by Dr. Buckingham to the Society for Medical Observation in Boston. "A young woman, twenty-six years old, was married on the 1st of June. On the 10th of the same month she missed her catamenia; on the first of July, she had nausea and vomiting, which continuing, she sent for Dr. B. on the 7th of August. At that time, she was unable to retain any food, the

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vomiting being almost constant. On the 12th, she had yellowness of the skin and conjunctiva. The matter vomited was not bilious, though the urine and saliva were loaded with bile; no pain or symptoms of inflammation about the liver; for ten days she vomited almost without cessation. On the 20th, she was wandering—matter vomited, grumous, dejections involuntary. After this date, she vomited more rarely, and on the 24th she died. The indications of pregnancy were perfect. No autopsy was permitted—every mode of treatment was made use of. Dr. John Ware, who was called in consultation, gave an unfavorable prognosis, and said he had seen two similar cases in one family." (*Boston Medical and Surgical Journal*, Vol. LII. No. 7.)

I could cite other cases which are reported, but these are sufficient to show the occasional gravity of the affection. Three fatal cases have occurred under my own observation. The first case occurred several years ago. The woman had been vomiting during the two last months of pregnancy—she was exceedingly prostrated when she fell in labor. The pains continued ineffectual for twenty-four hours, when I was sent for—I found her with a pulse of 140, and very feeble—I delivered her with the forceps, but she sank in a few hours.

The second case occurred in the practice of a medical friend. I saw her in consultation. She died after a month of vomiting.

The third case, was a lady, who commenced vomiting about the sixth week of her pregnancy. For three weeks she threw up almost every thing she took in her stomach; after that period her pulse increased in frequency, rising up to 100 in a minute; she complained of dimness of vision, and was unable to sleep at night. In the course of a week more, the pulse increased to 120; the dimness of vision increased, there was a ringing noise in her ears; mild delirium, and continued insomnolency. During the whole of this period there was obstinate constipation, no alvine evacuations unless procured by medicines. These symptoms continued to increase for a fortnight, when she died. During the last two weeks, however, she was able to retain some food on her stomach. The treatment pursued, consisted of such mild cathartics as could be toler-

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ated by the stomach, very small doses of calomel being best retained, enemata, and counter-irritants to the epigastric region, with the use of such remedies which sometimes allay vomiting, as the effervesing draught, lime water, creosote, &c., &c.

During the month of October last, a lady from a distance came to St. Louis, to consult me about her health. She stated that some two years before, she became pregnant with her third child; that she had suffered a great deal from nausea and vomiting, from about the eigth week of pregnancy to the seventh month, when she had a miscarriage and was very ill. In a short time after that she again became pregnant and suffered in the same way, until the fifth month, when she miscarried, and was so ill that her life was despaired of. Since which period her health was very bad; she complained of pain in the lumbar region, pain in the hips, sometimes radiating down the thighs, a bearing sensation when she walked about, leucorrhœal discharge, and irritability of the bladder; she had a feeling of weight in her stomach after taking food; her skin was sallow, and she was incapable of much exertion.

Examination per vaginam, detected an enlargement of the cervix uteri, with an abrasion of the epithelium all around the os, and extending into it, which was fissured, and had the *appearance* of being granulated, and was patulent. Supposing that her ailments arose from the inflammation, and its consequences, of the neck of the womb, I advised her to put herself under the treatment of her medical attendant at home, but she preferred to return to St. Louis. In about a month she came back, and I commenced the treatment of her case. Two weeks after her return she missed her catamenial flow, and became very much alarmed lest she should be pregnant. In about two weeks more she commenced vomiting, and her husband and she became very desirous that I should produce an abortion, as they were sure she could not live through her present pregnancy. I determined however to wait. In the first instance, I was not sure she was pregnant; and secondly, if she were, the urgency of the symptoms then did not require any such mode of procedure. She missed her catamenia again, and the appearance of the nipples, and the presence of kiestine in the

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urine determined the existence of pregnancy; her vomiting became so excessive, that she could not retain cold water on her stomach; she had fever during the greater part of the day, and was getting so weak that she could not conveniently set up. Every thing which I tried to alleviate her sufferings did no good, and I determined to bring on abortion. I tried the douche as recommended by Kiwisch and Tyler Smith; at the same time using the galvanic battery. These were persevered in for about a week, without producing any effect. I then gradually dilated the os uteri by introducing a sponge tent into it—every day inserting a larger piece during five days—at the expiration of this period I could introduce my index finger into the cavity of the womb. Sixty grains of ergot in infusion or divided doses were now given, and the abortion took place without any hemorrhage. The vomiting ceased immediately, and the treatment for the uterine disease being resumed, she returned home in the latter part of February, quite restored to health.

Vomiting during pregnancy does not depend on any inflammation of the stomach. It is a reflex action from the irritation in the uterus; thus, where death of the ovum takes place, whether it be expelled immediately or not, the vomiting ceases, clearly showing the connexion between the two. Moreover post mortem examinations have failed to detect the morbid appearance of inflammation in the stomach.

In a case quoted by Churchill, from the London Lancet, it is stated, no morbid appearance was observable in any part of the body. Two cases are also quoted, which were reported by M. Dance, Hotel Dieu, in the *Reporter*. In one, it is stated, "no lesion could be detected in the stomach, except a slight reddish tint in the mucous membrane." The whole of the intestinal canal was sound. In the other, there was red and softened spots near the cardiac orifice of the stomach; but we can readily enough understand that such spots occur independently of inflammation.

Obstinate vomiting during pregnancy not yielding to medical treatment, and terminating so often fatally, suggests to us at once the propriety of inducing abortion. The question arises, however, in every case—when are we justifiable in

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doing it? or are we justifiable in doing it at all? I have some friends, whose opinions I respect, who contend that it should never be undertaken. They say that the destruction of the ovum is an evil, and that religion requires that we should not do evil, even that good should come of it. I think that this is too restricted a view of the matter. It is better that the non-viable ovum, or even the viable fœtus should perish even by our hand, to save the life of the mother, than tamely to stand by, and let both perish. This, I believe, is the voice of the profession in Great Britain, France, Germany, and in the United States.

Being satisfied then as to its propriety, the question is, when should it be done, and what is the safest method? All are agreed that it should not be performed as long as there is a reasonable hope that the life of the mother can be saved without a resort to the operation. The question to determine is, when are we obliged to give up such hope.

M. Dubois in the discussion already referred to, laid down the following rules: Never to perform the operation where the signs of extreme exhaustion are present, as evidenced by considerable loss of vision, cephalagia, comatose somnolence, and disorder of the intellectual faculties; "because," says he, "we should not save one patient, but perhaps accelerate her death, and bring discredit on the operation." Of the propriety of this rule, there can be no doubt, and for this reason I did not bring about abortion in the third case I have related. Again, he says, "we should also abstain from operating when the vomiting, though violent and frequent, still allows of some aliment being retained; when the patient, though wasted and feeble, is not obliged to keep her bed; when the suffering has not yet induced intense and continuous febrile action; and when other means still remain untried"—because we should sacrifice a pregnancy which ought to be saved. According to him, there is an intermediate period that should be chosen, which is characterized by the following signs: 1st. Almost incessant vomiting, by which all alimentary substances, and sometimes the smallest drop of water, are rejected. 2d. Wasting and debility, which condemn the patient to absolute rest. 3d. Syncope, brought on by the slight-

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est movement, or mental emotion; a marked change in the countenance. 5th. Severe and continuous febrile action. 6th. An excessive and penetrating acidity of the breath. 7th. The failure of all other means.

These rules, although in the main good, are liable to some objections; sometimes the food is retained in the stomach for a few days, and then the vomiting returns as bad as ever; sometimes a portion of the food taken in the day is retained, yet the case goes on to a fatal termination; sometimes, although the wasting and debility show well enough the untractable nature of the affection, the patient can set up a portion of the day, until she is so extremely exhausted, that she would fall in that situation, when according to his own rules, the operation would fail to save her life. There is danger of waiting too long, as then the patient would die, either from the effects of the previous disease, or because she would be too feeble to undergo the operation.

The results of M. Dubois' practice seem to prove the truth of this assertion—of four cases, in which he operated, three died. Professor Stoltz lays great stress upon the operation being performed in good time, because if we wait until the effects of the sympathetic re-action constitute in themselves a serious disease, the evacuation of the womb does not induce a cessation of these, and may, in certain cases, even hasten death. It is difficult to lay down any particular rules to guide the practitioner in undertaking this most responsible operation. The experienced physician can generally judge how far he can rely on the efforts of nature and therapeutic means. But I imagine that when the patient retains so little food that she becomes daily more feeble and emaciated, when the pulse permanently increases in frequency, getting up to 100 or more, and when all other means fail to relieve the nausea and vomiting, we are justifiable in operating, without waiting for further symptoms.

I now come to the consideration of the best method to procure abortion when the operation has been decided upon. Various means have been proposed,—

1st. The administration of ergot.

2d. Detachment of the membranes.

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3d. Puncturing the membranes.
4th. Electricity.
5th. The uterine douche.
6th. Dilatation of the os and cervix uteri.

Ergot is very uncertain in its operation, although it will, undoubtedly, sometimes stimulate the gravid uterus at full term to powerful contractions, yet it often fails at that period. In the early months it is not to be relied upon at all—it would be too much to deny that it fails altogether in the early months, as the evidence is sufficient that it has succeeded; but the success is too unfrequent to justify our confidence in it—as an adjuvant to other methods it ought to be tried; that is to say, when other means have set up uterine action, it will have occasionally a decided effect.

The detachment of the membranes in the first three months is a method not without danger. Moreover, it is sometimes difficult, as the womb is not altogether under the command of the instrument. Again, the operation has been performed without effect.

Puncturing the membranes is far more certain, it always brings on labor in a few days. But in the early months, say in the first fourteen weeks, it is difficult to perform, and certainly very hazardous. It is true, it is done often, without any risk, but the annals of medical jurisprudence give many cases of fatal result. The same has occurred in legitimate practice. Dr. Tyler Smith refers to a case of a patient who died after the performance of the operation, in whom, the internal iliac artery was found to be punctured.

Electricity is a safe method, but it totally failed in the case I have reported. I have on several occasions referred to the power of electricity in stimulating the uterus in tedious labor, but it does not seem to have the same effect in bringing on abortion in the early months; that it has done so there can be no doubt. Dr. Ashwell relates a case, in which it was used in supposed amenorrhœa, and the patient being pregnant, abortion occurred.

The uterine douche was first proposed by Professor Kiewisch of Wurtzburg. It consists in directing a stream of warm water from a height by means of a syphon, continuously upon

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the os uteri. Dr. Tyler Smith has modified the operation by alternating warm and cold water. In a case, in which he successfully employed it, labor being brought on in sixty-four hours, the following method was adopted.

A piece of India-rubber tube, above eleven feet long, and half an inch in diameter, was connected with a straight tube from an injecting apparatus, five or six inches in length, the latter forming the uterine extremity of the syphon. A vessel containing two gallons of water of about 110° Fah. was placed nine or ten feet from the ground, the patient being placed in an empty hip-bath; the proper end of the tube was now passed into the vagina, and directed towards the os uteri, where it was held steadily—after exhausting the tube, the other extremity was placed in the warm water, the stream immediately began to flow with considerable force against the os uteri, and continued until the whole contents of the vessel had been discharged. Two gallons of cold water were then poured into the vessel and discharged in the same manner; five applications of the douche were made at intervals; the patient was within three weeks of full term. I tried this method in the case already referred, and it failed. Will it produce abortion in the early months?

Dilatation of the os and cervix uteri has been objected to, as likely to lead to peritonitis; I think on insufficient grounds. It was the method with which I succeeded; pains were induced, and then ergot being given, the effect was produced without an accident. I can readily understand that in the latter months of pregnancy where there is considerable obliquity of the uterus, it would be difficult to reach the os uteri—under such circumstances the douche might be preferable.

There are cases of such urgency, that it would be proper not to wait for the slower method of dilatation, or of the douche; the patient may be seen when it is necessary to arrest the vomiting, and its co-existing symptoms immediately. If she has passed her fifth month, the proper method would be to puncture the membranes; by discharging the liquor amnii, it is found, the vomiting will cease even before the delivery of the fœtus.

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To sum up. In the early months, if the operation be indicated, the method I would adopt would be gradual dilatation of the os and cervix uteri by means of sponge-tents; if the symptoms were urgent I would also try the douche, galvanism and ergot. In the latter months, say after the seventh month, I would rely on the same means, as by such we are more likely to save the life of the child, than if we were to puncture the membranes, and discharge the liquor amnii. If at any time subsequent to the fifth month, the case required immediate relief, and there was danger in delay, I would puncture the membrane, and discharge the liquor amnii.

PART II.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

Article I.

A Manual of Pathological Anatomy. By C. Handfield Jones, M. D., F. R. S., *Fellow of the Royal College of Physicians, Assistant Physician to and Lecturer on Physiology, at St. Mary's Hospital: and* Edward H. Sieveking, M. D., *Fellow of the Royal College of Physicians, Assistant Physician to and Lecturer on Materia Medica, at St. Mary's Hospital. First American edition revised—with three hundred and ninety-seven illustrations. Philadelphia: Blanchard & Lea—pp.* 733. 1854.

The design of this work is to present to the English reader an outline of the present state of pathological anatomy, which is certainly a most worthy undertaking, since there is no original work in our language which embraces the whole domain of pathological anatomy.

The authors "have sought to place before the reader a summary of ascertained facts, together with the opinions of the most eminent pathologists of this and other countries." They have not however satisfied themselves with a mere compilation of the facts observed by others; but while selecting, as far as

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possible, the best fruits from the harvest gathered by other laborers in this wide and interesting field, they have investigated for themselves the correctness of the various statements adopted.

In the English edition, of which the volume before us is a reprint, enlarged and improved—there are one hundred and sixty-seven well executed illustrations on wood, taken from original drawings, prepared from specimens coming under the observation of the authors themselves. But the American publishers, rightly estimating that the value of the work would be materially enhanced by increasing the number of illustrations, have added, under the supervision of a competent member of the profession, one hundred and thirty cuts in addition to those found in the London edition. They have also appended an account of the interesting microscopical observations of Dr. Donaldson, of Baltimore, on the so-called characteristics of the true cancer-cell.

The introduction of the microscope as a powerful aid in the study and investigation of the minute structures of tissues and organs, whether in a natural or morbid state, has effected such a wonderful revolution in the whole system of anatomy, as to render a work on the subject indispensable at the present crisis. We cannot therefore but regard the labors of Drs. Jones and Sieveking as an important contribution to the literature of the profession.

There is no subject in pathology which at present is eliciting more discussion than that of cancer or malignant tumors, and especially with reference to the real value of the microscope, as a means of differential diagnosis between malignant and non-malignant growths.

Under the head of new formation, this interesting subject is fully considered. Mr. Jones seems to favor the opinion of the non-specificity of the cancer-cell as revealed by the microscope. On the subject of the microscope as a means for the diagnosis of cancer, he remarks: "It is our opinion that the cases are very rare indeed where the microscope will avail to detect cancer, with any certainty, when the naked-eye features are insufficient. On the other hand, we have more than once seen unquestionable cancers made up of substances which we

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should have been led, from microscopic examination alone, to consider as of a simple nature."

The subject of the specific cancer-cell, and its microscopic diagnosis, is one confessedly of difficult solution, and which in the present state of our knowledge must be regarded as an open question. It is simply a question of fact, and can only be determined by a sufficient amount of careful observation, which as yet has not been made. This opinion of Mr. Jones, on the subject, is by no means conclusive; nor do we pretend that in the single quotation given, we have correctly represented his views on this point. For full information on this and other equally interesting topics, we must refer our readers to the work itself.

As to the arrangement of the work, we will briefly state, that it is divided into forty-three chapters. The first five of which are taken up with general pathological anatomy—embracing general observations, morbid states of the blood, textural changes, new formations, tumors and parasites. The next ten chapters are occupied with the pathological anatomy of the nervous system. Then comes the organs of circulation and perspiration—embracing sixteen chapters. After which, are severally considered the morbid anatomy of the alimentary canal, the urinary apparatus, the female organs of generation, the joints, and finally, the osseous system.

The work is a valuable one, and should be in the library of every student. It is to be had in the book stores of the city.

Article II.

What to Observe at the Bed-side and after Death in Medical Cases. Published under the authority of the London Medical Society of Observation. Second American, from the second and enlarged London edition. Philadelphia: Blanchard & Lea—1855.

We are glad to see that a second edition of this useful little work has been called for by the rapid sale of the first. It speaks well for the profession of our country. It is a work

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admirably adapted to meet the wants of the young practitioner, as it will impart to him a kind of information, which he very often needs, and which he can acquire no where else. Physicians are often deterred from keeping a record of their cases, as well as from making *post mortem* examinations, for the want of just such instruction as is to be found in this little volume; and most heartily do we wish that all of our readers, and especially our correspondents, would avail themselves of its teachings and profit by its directions, as the result could not but be improving to themselves and beneficial to the profession at large.

The design of the work is briefly set forth in its title. In announcing the first edition we entered somewhat into detail of its contents. It is only necessary now to state that in the present edition the whole of the work has been carefully revised by the very able and learned committee who drew it up, assisted by some other members of the London Medical Society of Observation, so as to render it even more useful than it was originally. Again, we would commend the work to all, and especially to our junior readers. It may be had of Edwards & Bushnell, on 4th st.

Article III.

A Dictionary of Medical Terminology, Dental Surgery, and the Collateral Sciences. By Chapin A. Harris, M. D., D. D. S., *Professor of the Principles of Dental Surgery in the Baltimore College; Member of the American Medical Association; Member of the Medico-Chirurgical Faculty of Maryland; Author of the Principles and Practice of Dental Surgery, &c., &c. Second edition. Philadelphia: Lindsay & Blakiston.* 1855. 8*vo. pp.* 800.

This work, although principally designed as a lexicon for the use of students and practitioners of dentistry, is so general and comprehensive in its scope as to be well adapted to meet the wants of the physician also. It is a dictionary containing satisfactory definitions of the words, phrases and technicalities

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belonging to Dental Surgery, as well as to the other branches of medical and the collateral sciences. Numerous synonyms have also been introduced, as well as all the new terms which recent discoveries and improvements in the arts and sciences and of the various specialities of medicine have brought into general use.

To the practitioner of Dentistry, for whom it is specially adopted, Dr. Harris' work must prove an acceptable offering, as it is calculated to enlarge the sphere of his knowledge, while to the physician it will also be found useful in imparting information not to be obtained from ordinary medical dictionaries.

Article IV.

A Practical Treatise on Foreign Bodies in the Air-Passages. By S. D. Gross, M. D., *Professor of Surgery in the University of Louisville; Member of the American Philosophical Society, &c., &c. With illustrations. Philadelphia: Blanchard & Lea—pp.* 468. 1854.

In this valuable monograph, Dr. Gross has certainly struck a new lead in surgery, and is entitled to the credit of having illustrated and systematised a most interesting, and hitherto, a most neglected department of surgical pathology and practice. In the preface, he tells us, that his original design was not to write a book, but to compose a short monograph for some medical journal; but that he had not proceeded far before he discovered that he had formed a very imperfect idea of the enterprise, and that in order to do it any thing like justice, it was necessary to devote to it much time and study. That this is true is most obvious, when we consider the industry and perseverance necessary to collect, arrange and analyse the numerous cases of foreign bodies in the air passages, scattered through the various medical journals of the United States, Great Britain and Continental Europe—in addition to these, amounting to nearly fifty, he has added also others, which now for the first time meet the public eye in this work.

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This subject is one of deep and often painful interest to the surgeon, for although fortunately not of very frequent occurrence, yet it is an accident which is liable at any time to occur, and for which every one should be prepared by a knowledge of the proper surgical treatment to be pursued. We therefore feel under obligation to the author for this work which was certainly much needed, although, perhaps, that need was not felt as it should have been. In commending the work to our readers, and referring them to it for a knowledge of its contents, we have only to say, that it will doubtless add to the already extended reputation of the author, as well as reflect credit on American surgery. To be had also at Edwards & Bushnell's, 4th st.

ARTICLE V.

Transactions of the American Medical Association— Volume Seventh—New-York. Charles B. Norton, Publisher—pp. 668. 1855.

This volume of Transactions, though not equal to some of those which have preceded it, is yet fraught with interest. Its contents are:—The Address of the Vice-President, Dr. Parsons. Report of the Committee of Medical Education. Report on the Epidemics of Kentucky and Tennessee. Report on Erysipelas. Report on the Medicinal and Toxicological properties of the Cryplogamic Plants of the United States. Reports on the Epidemics of Ohio, Indiana, Michigan, Louisiana, Mississippi, Arkansas and Texas, for 1852–'53. Prize Essay. Report on the Norwalk Disaster, and Dr. Linton's remarks on Yellow Fever.

The report of Dr. Cabell, of Virginia, on Medical Education, is a well written paper, in which is pointed out what he conceives to be the defects of the existing system of medical education in the United States. Among these, he enumerates, first, the want of a proper preliminary education on the part of a large proportion of medical students. This is unquestionably true, and is a source of deep regret to those engaged in

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the business of teaching. He then goes on to point out other defects, such as the shortness of the lecture term—the omission in the coniculum of one or two important branches of knowledge—the little attention paid in some parts of the country to clinical instruction, and finally, the low standard of attainments required for the degree of Doctor of Medicine. These points have been discussed over and over again, and we are not now disposed to enter the list either in attacking or defending the propositions assumed in the paper, which we regard upon the whole a sensible one, although upon all these topics we have our decided opinions.

Passing over all the other reports, we wish only to refer briefly to the paper of Dr. R. S. Holmes, of St. Louis, on Erysipelas. This we regard as altogether the most practical and valuable article in the Transactions. Dr. Holmes has had extensive opportunities of observing the disease in its most virulent forms, and his opinions are entitled to weight.

We fully agree with him as to the pathology of erysipelas—that it is a blood poison—a disease of the sanguineous fluid, or, in other words, a constitutional affection in which nature attempts to throw off the morbid element in the blood by means of the skin and the glandular structures. Even where the disease is the result of an injury, he thinks that it is the condition of the patient's system which gives rise to the characteristic erysipelatous inflammation. But we do not pretend to give even an outline of his views on the pathology of the disease, but simply to endorse the statement, that it is a blood disorder We are not altogether prepared, however, to adopt his treatment, especially so far as the larger doses of quinine are concerned, though it is worthy of trial.

As to the getting up of the volume, while we admit that both the typography and illustrations are well executed, yet we are at a loss to see wherein the Association has been profited by removing the publication from Philadelphia to New York. In publishing a list of the members from the treasurer's report, the committee have not been careful to compare them with the secretary's list, and in many cases the names of members are horribly mangled. Other inaccuracies might also be pointed out.

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ARTICLE VI.

The Principles and Practice of Obstetric Medicine and Surgery; with sixty-four plates and numerous wood cuts. By FRANCIS P. RAMSBOTHAM, M. D., *Fellow of the Royal College of Physicians, of London; Obstetric Physician to the London Hospital, and Lecturer on Obstetric and Forensic Medicine at the London Hospital Medical College; lately Physician to the Royal Maternity Charity of London, and Obstetric Physician to the Eastern and Tower Hamlets' Dispensaries; late President of the Hunterian, and Vice-President of the Pathological Societies of London. A new American edition, revised by the author—with Notes and Additions, by* WM. V. KEATING, M. D., A. M., *; Lecturer on Obstetrics and Diseases of Women, in the Philadelphia Medical Association; Physician to the St. Joseph's Hospital; Member of the American Medical Association; Fellow of the College of Physicians; Member of the American Philosophical Society, &c., &c. Philadelphia: Blanchard & Lea.* 1855.

The character and merits of Dr. Ramsbotham's work is so well known and thoroughly established, that comment is unnecessary and praise superfluous. In the emphatic language of Professor Hodge, in a commendatory letter appended to the present edition, it has received "the unanimous recommendation of the British periodical press, as the standard work on Midwifery; chaste in language, classical in composition, happy in point of arrangement, and abounding in most interesting illustrations. To the American public, therefore, it is most valuable—from its intrinsic undoubted excellence, and as being the best authorized exponent of British Midwifery." But in addition to this, and in order to adopt it more fully to the wants of the practitioner of this country, the American editor has embodied, as much as possible, the peculiar views of the most eminent authorities on obstetrics in the United States.

In the getting up of the work, the publishers have discharged their duty well and faithfully. The illustrations which are numerous and accurate, are also executed in the highest style of act. We cannot too highly recommend the work to our readers. It may be had at J. Halsall's, on Main st.

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PART III.

RECORD OF MEDICAL SCIENCE.

Novel Application of Electro-Chemistry to Therapeutics.

Chemistry is about to save from death, or a premature old age, those artisans whom the exercise of a cruel profession condemns to breathe metallic dust or vapors, who poison themselves daily for the sake of living, and acquire so many dreadful infirmities in the silvering of looking-glasses, the preparation of white lead, or working in the mines. Science comes to the help of the victims of industry or pleasure, and extracts from their bodies, atom by atom, the devastating metal that had fastened on their tissues, and weighed on the springs of life. These hopes are drawn from a memoir presented to the Academy of Sciences by M. Dumas, and the authors of which—MM. A. Poey, of the Havana, and Maurice Vergnés—will hold a distinguished rank among the benefactors of mankind, if experience confirms their assertions.

The invention consists in the application of electro-chemistry to the cure of the diseases we have mentioned; and surely, of all its marvellous uses, this would be the most admirable.

M. Poey takes an unfortunate patient, corroded by lead, mercury, gold, silver, or any other metal, and places him in a metallic bathing tub, isolated from the ground. The man sits down, his legs horizontally stretched out on a wooden bench, isolated from the tub, which is filled with water up to his neck. The water is slightly acidulated, to increase its conductibility; and the acid varies according to the cases. Nitric or hydrochloric acid is used for the extraction of mercury, silver, or gold; sulphuric acid for that of lead. This done, the negative pole of a pile is brought into contact with the sides of the bathing-tub, and the positive pole placed in the hands of the patient.

The work of purification is now in full activity; the electrical current precipitates itself through the body of the sufferer, penetrates into the depth of his bones, pursues in all the tissues every particle of metal, seizes it, restores its primitive form, and, chasing it out of the organism, deposits it on the sides of the tub, where it becomes apparent to the naked eye.

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In this great discovery, chance or accident has played a part. One of the inventors—M. Maurice Vergnès—occupied himself with galvanic gilding and silvering. His hands being in continual contact with solutions of nitrate and cyanuret of gold and silver, got covered with ulcers in consequence of the introduction of metallic particles. One day he plunged the diseased organs into the electro-chemical bath, at the positive pole of the pile; and after a quarter of an hour, to the great surprise of the beholders, a small plate of metal brought into contact with the negative pole covered itself with a thin coating of gold and silver, extracted from the hands of the operator, whence the most powerful remedies had not been able to eliminate them. This discovery was made on the 16th of April, 1852.

The authors employ a pile of thirty pair of plates, approaching, at the same time, that of Bunsen and of Grove, as coke and platina enter into its composition, by which its action is rendered more energetic. Each pair has a diameter of 40 millimetres, and is 217 millimetres high. The number of the pairs to be used at the beginning of the operation depends upon the temperament of the patient and the nature of the malady. Thus, a delicate and very nervous person is at first submitted to the action of ten or twelve pairs only, and every five minutes the number is increased. A person of a sanguine or lymphatic temperament is able to endure a greater number of elements. The same observation applies to the quantity of acid employed in the bath, less being required for a nervous than a lymphatic constitution.

The metallic atoms extracted from the body deposit themselves on the whole surface of the tub; but they are more abundant opposite to the part of the body where the metal was lodged. The size of the metallic spots varies considerably; some are microscopical; others have the dimensions of a pea; those of the size of a pin's head are very common. "I have seen," says M. Poey, "after the bath of a person who complained of pains in the arms, from having taken mercury, the contour of the arm perfectly drawn upon the metallic plate by the deposit of metallic atoms that without doubt proceeded from the suffering member."

We shall terminate our article with an experiment made before the members of the Faculty of Medicine of the Havana.

A patient had undergone during a whole week an external mercurial treatment (frictions, with mercurial ointment.) He had then taken several lukewarm baths, and it could not be supposed that any mercury still remained attached to the skin.

He was put into a water bath mixed with muriatic acid. After having remained in it for five minutes, some of the

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water was taken out, and afterwards analyzed by M. Baraceca, who found no traces of mercury in it.

The circuit was then closed; and, after the electric current had acted for about an hour, a new sample of the water was taken. Mixed with an alkaline sulphuret, the water became black; and a piece of copper having been dipped into it, gave sure signs of the existence of a small quantity of mercury. Thus the water of the bath now held mercury in solution.

During the experiment, a perfectly clean piece of copper had been placed at the negative pole. When it was taken out of the water, towards the end of the operation, its yellow-greenish color not only testified an oxydation in which mercury had taken a part, but small white spots were scattered over the surface, one of which, of the size of a square line, was very brilliant and of a mercurial whiteness. The plate having been heated underneath, the spot disappeared, and the original color of the copper was restored, which proves that the spot was mercurial.—*London Med. Times.—Med. Ex.*

Fatal Poisoning by Nitrate of Potassa. By John Snowden, M. D.—A German, who spoke English imperfectly, went into a store, and asked for "bitter salt," meaning sulphate of magnesia. The attendant supposed he meant saltpetre, and gave him half-a-pound. The man took three ounces and a half at one dose. His bowels were opened three times within three or four hours. He complained of a slight sense of heat in the epigastrium, and drank a good deal of water. About five hours after having taken the saltpetre, he suddenly fell out of his chair and died.

The marked peculiarity, in this case, is the absence of the painful symptoms which usually follow the ingestion of irritant poisons; and the question arises, how was death produced? Certainly not by inflammation of the stomach, for he complained of nothing but a slight sense of heat in the stomach. The poison must have acted by destroying the vitality of the blood. There was no *post mortem* examination. The rigor mortis was very imperfect, the lips of almost a natural pink hue, and the appearance of the countenance so life-like, that some persons who were present doubted the propriety of interment on the third day.

[*New Jersey Med. Reporter.*

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Removal of a Portion of the left Lung. By T. B. Hale, M. D., C. D———, an Irishman, aged twenty-five years, rather small in stature, but stoutly built, with a well developed chest, being engaged in a fight while intoxicated, received a stab in the left side, parallel with the ribs. The wound was about one inch and a quarter long, and appeared to have been made with a sharp, clean-cutting instrument. About fourteen hours after the injury he was visited by Dr. Hale, who found, upon examination, a portion of the left lung protruding from the thorax. He was sitting up in bed, having the protruded portion supported by a broad bandage. He complained of no pain, and had suffered but little from loss of blood. There was no cough or difficulty of breathing, but on taking a full inspiration, the protruded lung became filled with air, and drops of venous blood oozed from its substance. The protrusion was so tightly strangulated at the wound in the thorax that after an hour and a half spent in unsuccessful efforts to restore it, Dr. Hale made a cautious attempt to enlarge the wound in the interosseous space. Fearing, however, the effect of a large opening into the cavity of the pleura, he was induced to desist, and consider the propriety of excision. As the protrusion looked extremely unhealthy, from the length of time since the accident and the efforts made to reduce it, making gangrene not an improbable result, excision seemed to be the only resource. Dr. Hale contemplated applying a ligature at the base of the protruded lung, but on making two experimental incisions into its substance, and no blood flowing, this was not judged necessary, but the mass was at once excised, and the remaining portion pushed back through the wound in the interosseous space, the orifice of which was then closed with two stitches and strips of adhesive plaster. The patient was then directed to lie quietly on his back, and a mixture of two parts syr. prun. virgin., and one part syr. opii prescribed; a tablespoonful to be given every two hours for the purpose of allaying irritation in the bronchial tubes. On the second day Dr. Hale found him in a favorable condition, and on the sixth day he walked five miles to visit his physician, suffering in no manner from the loss of the portion of lung. For the last three months he has labored constantly in the coal mines, without inconvenience.

The speedy recovery of the patient appears to have been due to adhesive inflammation between the adjacent walls of the pleura, through the wound in which the protruded lung was strangulated. In all probability the pulmonary and costal pleura and the substance of the lung are all connected in the same cicatrix.—*West. Jour. of Med. and Surg.*

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New Method of Inducing Premature Delivery.—Dr. Scanzoni was induced, by observing the active sympathy between the breasts and the other parts of the sexual apparatus, to try to produce premature delivery by irritating the nerves of the mammary glands. The first experiment was made upon a young woman, aged twenty-four, who, two years ago, had been delivered by perforation, in consequence of contraction of the pelvis. In the thirty-second week of utero-gestation, apparatus constructed of caoutchouc, forming sucking-pumps, were put upon the nipples. During three days they were used about seven times, the process going on upon each occasion for two hours. After the third application, the neck of the uterus became shortened; after the sixth, severe labor-pains came on; after the seventh, the child was born.

The only danger likely to ensue from this very simple method of treatment is inflammation of the mammæ; this can be met with proper treatment.

A second case, of similar kind, occurred to the author. A young woman, *enciente* for the first time, suffered so severely from dyspnœa, connected with organic disease of the chest, that premature delivery was necessary for the preservation of her life. After the third application of the sucking-pumps, an apparently dead child was born; respiration, however, was soon re-established. The author remarks that this case is not quite conclusive, because premature delivery occurs often in connection with severe dyspnœa, independent of other influences.—*Med. Times and Gazette.—Southern Med. Jour.*

On Fissures of the Nipple during Lactation.—Nurses are frequently affected with fissures on and about the nipple. Nothing can be more painful than nursing under these circumstances, and frequently it is necessary to discontinue it, at least on one side. M. Bourdel, Assistant Professor of the Medical Faculty of Montpelier, says, he has used for ten years a method which he has never seen to fail when the fissures were not due to a constitutional cause, whether syphilitic or other.

The substance used is the tincture of benzoin, which is applied by means of a fine badger's hair pencil to the cracked or ulcerated surface, so as completely to cover them with this liquid. Only the first application is painful, and this is characterized by a smarting proportioned to the depth of the ulcerations, and does not continue more than a quarter of an hour.

The tincture of benzoin forms a kind of covering on the surface of the nipple, which protects it, and the child takes the

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breast without any repugnance, even when the tincture is not dry. This covering, when hardened, defends the ulcer from contact with the air, and the garments, and dispenses with lotions, which are not well borne. Lactation is not interrupted, for it ceases to be painful. Cicatrization takes place at the end of some days. The treatment is never prolonged beyond twelve days.—*Am. Med. Monthly.*

Topical Uses of Iodine.—The value of iodine as a counter-irritant is year by year becoming more generally appreciated, and is yet much less so than it deserves. The iodine solution will probably, before long, entirely supersede mustard plasters, being at once more efficient, and much less disagreeable in its employment. The following notes on its applications will, perhaps, not be useless; they are the results of very extended observations in the hospitals generally, but more especially in those devoted to the treatment of diseases of the chest:—

1st. In the pleuritic stitches, or aching pains in the chest, so commonly recurrent in the course of phthisis, the iodine paint, applied over the affected spot, usually affords, without any expense to the vital powers, much more relief than either leeches, sinapisms or blisters. It may be used in almost all conditions of the system with perfect safety.

2nd. In cases of aphonia or hoarseness, depending on inflammatory thickening of the parts concerned in the producduction of voice, great benefit may be derived from painting the iodine over the front of the throat externally.

3rd. If the mucous lining of the fauces, etc., be thickened and congested, the solution may, without risk, be freely applied to the part itself.

4th. In the treatment of chronic enlargement of the tonsil, the application of iodine to the gland itself will sometimes effect a cure, but is much less generally efficient than constitutional treatment.

5th. In cases of chronic pleuritic effusion, or of consolidation of the lung, the solution should be painted over a large extent of the diseased side, and is of great service when the period for blistering or leeching has passed.

6th. Applied extensively over the belly, iodine is a useful counter-irritant in the incipient stages of strumous peritonitis.

7th. In strumous ophthalmia, the application of the pharmacopœial tincture to the skin of the lids is often effectual in relieving intolerance of light; much benefit may also be derived from like practice in cases of granular lids. In both instances, frequent repetition is necessary.

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8th. In all forms of periostitis, whether syphilitic, strumous, or the result of injury, iodine paint is invaluable.

9th. It is needless, perhaps, to mention the employment of iodine as a local application to bronchocele, to inflamed joints, and to the enlargements of the absorbent glands; with regard to the latter, a point is worthy of being borne in mind, to which Dr. Budd was, we believe, the first to direct attention, viz: the propriety of applying it to the skin beyond, and not over the affected gland, so as to allow of its being absorbed and taken through the gland in the course of the limphatic circulation.

10th. Injections of iodine into the cavities of abscesses, glandular or otherwise, appear most frequently to produce good results, and to be unattended, except in very exceptional instances, by any risk. The theory of their use is, that the adhesive and not suppurative inflammations, as for instance, in the radical cure of hydrocele.

11th. In cases of contracted cicatrices after burns, in which treatment by extension is adopted, the application of iodine is of advantage in causing the absorption or softening down of the indurated structure. Some cases illustrative of this have recently been under care in the Middlesex Hospital. Care must be exercised, or ulceration may be caused.

12th. In cases in which the patient cannot be got to swallow medicine, as now and then happens in phagedæna, of the throat, the specific influence of iodine may be induced by its endermic application, the best method being to paint over large surfaces of the skin the pharmacopœical tincture, choosing a different part each time.

The reason why, as a counter-irritant in all forms of chronic inflammation, iodine appears so superior to other applications, is doubtless to be found in the fact that it is capable of absorption, and may thus act beneficially in two distinct methods.

We have enumerated above some of the chief uses to which the iodine solution is daily put in the practice of the London hospitals, but do not profess to have mentioned all. These are, however, enough, we think, to prove its right to a place on the dispensing table of every medical practitioner.—*Ibid.*

Maternal Influences.—The following remarks were written two or three months since, on reading an article in the *Scalpel* on the subject of Maternity, in which some very striking cases are introduced, for the purpose of showing the remarkable effects produced upon the child *in utero* through the medium of maternal mental influences. If you think them worth an insertion in the *Gazette*, they are at your service.

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The position of the writer in the *Scalpel* is, "that objects which strike the eye, and deeply affect the sympathies of the mother, can impress a *characteristic mark upon the infant.*" That this is not only possible, but common, is very generally believed, and is doubtless fully impressed upon the minds of most mothers, and maintained by some medical writers. Nevertheless, we hold it to be without foundation; and as it is in many instances the cause of painful anxiety to the minds of pregnant women, who have from unavoidable causes been the subjects of unpleasant, disagreeable mental impressions, it is a matter of some importance to discard the hypothesis if it is not true. Absolute demonstration *pro* or *con* is out of the question; but we admit, if it could be made to appear that cases like those in the *Scalpel* were of common occurrence, the conclusion could not be avoided that the "mental influences" and "characteristic marks" stood in the relation of cause and effect. That such cases are, however, of common occurrence we do not think is by any means the truth. On the contrary, that they are extremely rare we are induced to believe, in view of the fact that, in the course of an extended medical practice for nearly thirty years, we have never met with a solitary case that seemed to afford any support to this hypothesis: on the contrary, we have met with many that furnish very strong negative proof of its having no foundation in truth; and that no mental impressions of the mother can affect the child *in utero*, except such as affect her general health, by which, of course, the *health* of the child would be indirectly affected; but no characteristic *marks* produced. It would follow, therefore, that the *Scalpel's* cases must be regarded merely as remarkable coincidences. Although physical changes are constantly being produced in various parts of the animal economy, which are to be referred to mental impressions as their cause, yet these are produced by the nervous influence being conveyed to, and acting upon the organ or part, through the medium of the nerves; and as it never has been demonstrated that the umbilical cord contains a nerve or nerves through which such influence might be transmitted, it seems reasonable to conclude that no "mental impression" of the mother can be conveyed to and act upon the child in utero. If this were possible—if the child could be marked by the accidental or disordered fancies or strong mental impressions of the mother, we think that few children would be born perfect, as most mothers during some period of their gestation are the subjects of such influences, to a greater or less extent. Nature has not established so imperfect an arrangement, and the vast majority of children are born perfect. Among the many cases that we might cite in support of our opinion on this subject, we select

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the following: and if a strong, protracted, and painful mental impression can ever produce a "*characteristic mark*," we might have expected it in this case.

Mrs. E——, aged about twenty years, was pregnant of her first child; soon after discovering her condition, to the surprise of her friends she became extremely melancholy and dejected, without making any disclosures as to the cause. They concluded, however, that it was owing to that peculiar mental capriciousness to which pregnant females are sometimes subject, and consequently did not regard it with much anxiety; her general health was good, and she went her full time. At the accouchment nothing remarkable occurred until the child was delivered, when immediately, and with great vehemence, she cried out, "Isn't it covered all over with black hair?" On being assured that the child was perfect, she was in an ecstasy of joy. In reply to the question as to the cause of her singular query, she stated that, soon after she found she was pregnant, she was one day sitting alone in her room, when a strolling beggar with a hideous *long black beard* (this was many years ago, when few or none wore uncut beards) covering almost his entire face, without notice, suddenly entered her room; her fright was extreme; and the long black beard produced such a powerful impression upon her mind, that from that moment she was fully impressed with the belief that she would give birth to a child "covered all over with black hair," and, consequently, was miserable on account of her firm faith in the hypothesis that "strong mental impressions produce a *characteristic mark upon the child.*" Could she have been assured that no such result need be feared, much unnecessary misery could have been avoided.

How imperative the duty, therefore, of the physician to reject all unfounded hypotheses, and to aim at the possession and dissemination of clear and sound views on medical subjects, by which he may be enabled to aid in disabusing the public mind of mischievous and erroneous opinions. P.

[*Am. Med. Gazette.*

The Revue Medicale and the Debate on Cancer.—"Let us turn a critical eye," M. Sales Girons, (disciple of M. Cayol, and editor of the organ of the Vitalists) "on that famous debate in which the School of Paris, in formal session at the Academy of Medicine, is demolishing that great edifice which cost it forty years of labor. Anatomism, like Saturn and the Revolution is at last devouring its own children.

Ninety-nine in a hundred of those who read the narrative of

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the present academic war, will see in it a simple scientific discussion, rather bitter it is true, about tumors in general, and the incurability of cancer in particular.

But the subject of tumors is only the pretext, the incurability of cancer only the outside noise of the conflict. The eternal truths of medicine are in question, and the fathers of the Anatomical School, represented by M. Velpeau, are vainly attempting to arrest the torrent which they themselves set in motion, not forseeing whither it would lead.

When we look beneath the surface of the debate which agitates the Academy, we find the *Microscope* and the *Clinic* in mortal combat.

The microscope, an amplification of the much vaunted scalpel, represents *matter*.

The clinic, scoffed at and disdained by the anatomo-pathologist, represents observation, *æoup d'eil*, experience, and medical tact and genius.

The microscope is the despotic instrument; the clinic is the intelligence which reasons.

The microscope is the *fact*, the clinic is the *science*.

The microscope is —— is the utter negation of medicine; the clinic is its supreme affirmation.

And yet the microscope is the very culmination, *le derniere mot* of anatomism; judge, then, anatomism. We are constantly asked to demonstrate the practical utility of sound doctrine; wait a while and look at the natural consequences of a vicious system.

Practitioners who have grown grey by the bed-side, physicians and surgeons who have earned a right to form a diagnosis, what are you thinking of? Of cancer. Why, send a piece of the tumor to a micrographer in vogue, and by return mail you will have a ready made diagnostic, and the best prognosis the market affords.

But cancer is only the beginning; soon we shall be required to obtain the micrographer's assent to our diagnosis of phthisis; unless the sputa he inspects contains tuberculous matter our observations will be valueless; and then his domain will be extended to all morbid alterations, all normal and abnormal secretions, until medicine becomes the tributary of the microscope, the physician the servant of the micrographer.

The anatomo-pathologists decreed that matter should teach mind, that fact should predominate over science, that the senses should control the perception; here is the last step of the system,—the instrument has replaced the understanding! *patere legem quam fecisti.*

This is the true meaning of the final scene which is now being enacted at the Academy of Medicine. I say *final*, be-

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cause the old or scalpel anatomists, and the young or microscope anatomists are engaged in mutual annihilation. We see the fathers struggling to avoid the abyss which they dug themselves to lay the foundations of their system, and we hear their cries.

The clinic, they exclaim through the mouth of M. Velpeau, leave us the clinic, which after all will answer for medicine and the physician. When I patronized the microscope twenty years ago, adds M. Velpeau in his own name, I was far from suspecting the pretensions which it would set up; I renounce the microscope, its pomps and vanities!

—— But admit, interrupts the microscope, that I possess the cancer cell, and consequently the diagnosis of cancer?

—— I will not admit that even, I will rather deny it, replies M. Velpeau.

—— And M. Velpeau is right; he knows the story of that child with innate diplomacy who refused to say A because he knew that afterwards he would be made to say B, and then the whole alphabet.

—— Grant us at least, resumes the microscope, the incurability of cancer?

—— Not I, says M. Velpeau, cancer is curable, I have my hand full of examples to prove it.

—— But you teach, the devil take it, urges the microscope, the pathological localization of cancer?

—— Heaven preserve me from such a doctrine, responds M. Velpeau; cancer is a diathesis, a dyscrasy, a cachexy; cancer is in the blood before it is in the breast. Cancer, interrupts M. Jules Cloquet in his place, Antoine Dubois was right about it, it is in the nervous system! (*Loud and prolonged applause from the fathers of anatomism*).

—— But this is the ruin of your system, cries the microscope, you are in flagrant contradiction with the principles of the celebrated school which admires you as one of its most illustrious representatives.

——That is possible, rejoins M. Velpeau, the contradiction is my affair; I would do yet more in order to have nothing in common with you, who would destroy medicine with your radicalism. If the microscope is the termination of Anatomism, let it go, let it have its last judgment. *Solvet sæculum in favilla!*

With the aid of this little commentary, the reader will discover the true meaning of the antagonism in this academic debate. On the one hand he will perceive the microscope, respectfully aggressive; on the other clinical medicine, defended by an army of veterans, courageous rather than consistent. The micrographers are striving to maintain: 1st, the

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monopoly of diagnosis; 2d, the incurability of cancer; 3d, the localization of the cancerous tumor, an anatomical triad, which is a triple negation of medicine. The founders of anatomism are denying anatomical diagnosis, incurability and localization, and defending clinical observation.

And we may predict the result of the battle; the microphiles will be beaten; anatomism will be demolished, and true medicine, re-established on the ruins of a half century, will point to the conversion of M. Velpeau with more pride than to the ninety-and-nine faithful, who have adhered to her throughout the era of systems.

And will the microscope be lost? Certainly not; but clinical medicine will assign it its true place, making it subservient to order and truth; under the reign of anatomism, it could only be an instrument of anarchy."—*Med. Rev.—West. Jour.*

The Treatment of Phthisis by Iodine Inhalations. By M. Piorry.—We take the following extracts from a paper read before the Académie de Médecine. M. Piorry writes:—

I was induced to employ iodine and the vapors of iodine in the curative treatment of pulmonary phthisis by the following circumstances. It was known that iodide of potassium possessed a real and even prompt efficacy in chronic ostitis and periostitis, in scrofulous glandular enlargements, and in many other affections more or less allied with tuberculosis; M. Deyne, an interne of my service, and I, concluded that this remedy would be useful in phthisis. The results of our experiments were very satisfactory. A striking amelioration took place in many of our patients, and this amelioration was real, for of the patients mentioned in my work on "Practical Medicine," three or four are still living, and in the enjoyment of good health.

After the successful treatment of hydrocele and tuberculous diseases of the testicle by iodine injections, it was natural to attempt to obtain similar results in pulmonary excavations. It would have been difficult, if not impossible, at all events it would have been extremely rash to have injected tincture of iodine into the air passages. We therefore bethought ourselves of the vapor of iodine.

In hospital practice, it was necessary to select the simplest methods of inhaling iodine. One or two scruples of iodine were accordingly placed in a wide-mouthed jar of the capacity of a quart; the vapor of it was disengaged spontaneously with more or less rapidity according to the degree of heat and moisture of the atmosphere.

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When we used the tincture of iodine, we poured from one to three ounces in the jar, and heated it until the vapors of alcohol and iodine were liberated.

The patients breathed the air contained in these recipients, and charged with alcoholic and iodine vapor. One inspiration at a time is sufficient, but it should be deep, as when a sigh is heaved. Such an inspiration produces little irritation of the air passages; it should be repeated one or two hundred times every day, at intervals; for several successive inspirations produce pain in the larynx and bronchi, and cough.

Even during sleep the patient should inhale iodine. For this purpose several saucers, each containing one scruple of iodine, should be placed about the pillow. At the hospital, we attach numerous phials of iodine to the iron frame which supports the bed curtains. The air thus becomes saturated with iodine; the starched curtains are colored blue, and the iron of the bedsteads assumes different tints under the action of the iodine.

If a moist starched paper is interposed between the jar containing iodine and the patient's mouth as he takes an inspiration, it turns blue; if the same air, after traversing the lungs, is breathed upon the paper, it causes no change. The inference from this fact which I have observed very frequently, is that the iodine which entered the lungs is absorbed there, during the brief sojourn of the air in the air-vesicles.

The majority of the patients subjected to this treatment at *La Pitié*, *La Charité*, and in my private practice, took also from twenty to sixty grains of iodide of potassium daily. In all those cases in which the extent of the lesions rendered it probable that adhesions, or that remarkable supplementary circulation so well described by Natalis Guillot, existed between the pulmonary and costal surfaces, we had recourse to frictions with tincture of iodine diluted with nineteen parts of water. The patients were placed, in some cases, under other modes of treatment: 1. Under the use of tartar emetic in small doses, the fifth of a grain, for example. This heroic remedy was employed chiefly in those cases in which mucous, puriform, or purulent liquids accumulated in the bronchi, and produced a tendency to asphyxia or hypoxæmia. 2. Under the use of astringents, when the state of the intestinal canal required it; alum, opiates, phosphate of lime, subnitrate of bismuth, &c., were employed with this object, but their use was discontinued as soon as the diarrhœa was suppressed. 3. Under the use of quinia; in large doses when the spleen was congested; in small doses when there was simply a nightly exacerbation of fever depending upon the entrance of pus or softened tuberculous matter into the circulation. 4. Upon a

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nutritious and reparative diet; a very important point, for surely, if I was called upon to choose between hygienic precautions and the whole category of remedies besides iodine, I should give the preference to a good regimen. 5. Belladonna, opium, and other narcotics were employed, though rarely, to moderate the cough.

The cases which I have treated have not required the use of setons, issues, permanent blisters, or moxas, and I have not been able to comprehend the utility of these artificial pyogenic lesions in a disease in which the formation of pus is a disastrous accident.

Almost all of the patients remained in Paris. They were not sent to Nice, or Pisa, or other parts of Italy, a country where phthisical patients, coming from the north, in spite of all that has been said, recover no faster and no better than elsewhere.

Thirty-one patients have been subjected to the treatment thus described during the past two years. They all presented, in different degrees, the symptoms commonly attributed to pulmonary phthisis; that is, cough with puriform expectoration, hectic fever, emaciation; the majority of them suffered from diarrhœa, connected probably with tuberculous ulcerations; in many the larynx appeared to be involved in tuberculous disease; the majority had spit blood.

All of these subjects presented marked dulness at the summit of the lungs, either under the clavicle or at the superior scapular region. In most cases there was a hardness at these points, perceptible to the finger. Ordinarily it was possible to define the diseased structure accurately, and to distinguish the parts in which there was great condensation from those which had undergone less alterations of structure. In some cases a *bruit hydrærique* could be heard.

In every case the stethoscopic signs were as positive as those revealed by plessimetry. At the points at which dulness and resistance had been noted, the ear recognized rude or tubal respiration, and more or less resonance of voice. In many cases large cavities were indicated by loud gurgling, cavernous respiration, and pectoriloquy. Each patient expectorated round, opaque, nummular sputa, the amount of which corresponded with the extent of the disease as determined by other methods of exploration.

I desired to appreciate the effects of iodine with precision, and therefore I did not trust to the indications of plessimetry. I ordered charts, on which were described exact delineations of the diseased parts, and representations of the variations in sound upon percussion which occurred from day to day. In casting the eye over these figures, it will be seen that after four, six, or twenty days, six weeks, or three or four months

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of the iodine treatment, there was in almost every case a diminution in the extent of the surface over which there was at first feebleness of respiration, dulness, resistance, &c.; that, at the same time, the stethoscopic signs indicated an amelioration in the condition of the condensed portions of lung. This result did not occur only in those patients who were slightly diseased, but in almost every case. Numerous patients with cavities in the lungs were apparently cured. The ultimate results were as follows: Decided amelioration in the symptoms and anatomical characters in twenty patients. Disappearance of the anatomical characters and of most of the symptoms in seven cases. Death, with or without amelioration, in four cases.

After some reflections upon the possible manner by which iodine operated in the cure of phthisis, M. Piorry concludes with the following propositions:—

"1. The inhalation of the vapor and tincture of iodine is useful in the cure of phthisis.

"2. In many cases such inhalation is followed by a diminution in the extent of the indurated parts surrounding tuberculous deposits, and an amelioration in the general symptoms.

"3. It is probable that tubercle itself disappears under the influence of iodine inhalations.

"4. That inhalations of the tincture of iodine may promote the cure of tuberculous cavities.

"5. That after the softening of tubercles, the resulting cavities may cicatrize spontaneously.

"6. That compression of the thorax over the points of disease indicated by percussion and auscultation, may contribute to the cure of the local lesion, and to the prevention of pyæmia.

"7. That iodide of potassium administered internally, and frictions with diluted tincture of iodine over adherent portions of the lung, are also of great utility.

"If," adds M. Piorry, "any useful therapeutical facts have been brought out in the preceding essay, I would observe that science and humanity are indebted for them to the progress of accurate diagnosis."—*Record of Medical Sciences.*

Involuntary Seminal Discharges. By D. D. Slade, M. D.—Since the reading of our paper on Involuntary Seminal Discharges, before the "Boston Society for Medical Observation," and published in the Boston Medical and Surgical Journal, Vol. XLIX, No. 22, farther experience in many cases has entirely confirmed the opinions therein expressed. In addition, we have the satisfaction of knowing that our views upon the

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subject have been received with marked approbation by many of the profession. In a letter communicated to us soon after the publication of the paper in question, our oldest and most esteemed practitioner says, "Since I had experience enough to form an opinion, I have been satisfied that the alarming statements and consequent anxiety on this subject were groundless. That there are cases which would ordinarily come under this head of a severe character and really injurious, is true, but these are very rare. I could almost count all such cases upon my fingers, after the experience of more than half a century.

In common cases, I say to the patient that matrimony is the remedy. Illicit indulgences are not the same thing. They are usually irregular and often excessive. In quiet, domestic life, *usually*, the indulgences are not more than can be borne, after the early periods."

The importance of this subject, affecting, as it does, to a greater or less extent, the happiness and peace of mind of so many young men not only in our cities but also in our country towns, who get erroneous impressions from perusing the publications and advertisements of charlatans so widely circulated, has induced us to ask the favor of a place in your journal for our paper, with some trifling additions made since its first publication.

We may venture to say that there is not a medical practitioner among us who is not sometimes consulted by individuals who suppose themselves to be suffering both mental and bodily derangement from involuntary seminal discharges, occurring more or less frequently. In the great majority of these cases, it is found that these discharges occur during the night, whilst the individual is asleep, and they are preceded by erections excited during lascivious dreams. Cases of this description are extremely common, and are generally classed by medical practitioners and writers under the term spermatorrhœa. Our object in preparing the present article, is to attempt to show that these cases, as they are commonly presented to our notice, do not merit the importance which has been given them, and that they should be considered as entirely separate and distinct from what may be strictly termed spermatorrhœa (although they may sometimes lead to this), an affection, which, as described by medical authors, we conceive to be extremely rare among us. Sufficient, it is true, has been written upon spermatorrhœa, but the exaggerated descriptions therein given do not answer to the cases of simple involuntary seminal emissions which are so often presented to the notice of the practitioner here, and which he is called upon to treat.

We fully agree with Robley Dunglison, who has written a

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most practical and sensible article upon the present subject, in the Cyclopœdia of Practical Medicine, that there can be no greater evil to the economy from a flow of semen accompanied by venereal desire without sexual intercourse, than with it. There can be no doubt than an excessive secretion of semen, in whatever way it may be induced, may have an injurious effect upon the system, but we cannot for a moment believe in the long category of complaints which have been attributed to this as a cause.

Involuntary seminal discharges occurring during sleep in young, robust and continent subjects, constitute a class of cases which are almost daily presented to our notice. It is very rare, in fact, judging from our experience, to meet with a young man of vigorous health who does not experience these emissions more or less frequently, particularly if he be continent. And why, we ask, should this be considered as constituting a morbid condition, or as contrary to the laws of nature?

The secretion of semen, although it is, like other secretions, very much under the control of the nervous system, and therefore increased according as the mind is directed towards objects which awaken sexual feelings, must still in a measure be constantly going on under all circumstances. Consequently the presence of an undue amount of sperm in the vesiculæ seminales (which are truly reservoirs according to the best authorities of the present day) if not got rid of by sexual intercourse, must produce an excitement in those organs during sleep, which excitement is appreciated by the brain giving rise to voluptuous dreams, during which the seminal discharges take place. Even granting the opinions entertained by many physiologists, that absorption of the semen takes place, and that it is necessary for the regular maintenance of nearly all our functions, yet we may easily suppose that this absorption is not the same under all circumstances, and that the supply may exceed the demand, particularly in the young, robust and continent individual.

We can scarcely, then, consider moderate involuntary seminal discharges, occurring during sleep, accompanied by lascivious dreams and erections, as constituting a morbid condition. In proof of this, we may say, that there are many individuals who have had even frequent seminal emissions for a long period without experiencing the slightest inconvenience from them, and without ever even giving them a passing thought, until their eyes fell upon the advertisement of some empiric who has set forth the horrors and dangers to be expected from a similar condition. But from this moment there is no more rest for these poor beings, who constitute a class, which, with Ricord, we may term "veritable spermatophobists, men who

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are tormented, hypochondriacal, dejected, and in whom the cauterization of the neck of the bladder does not always succeed in curing the brain."

"It may be asked, then, to what extent these seminal discharges may take place without actually producing any morbid effects upon the system. In answer, we must say, that this depends upon circumstances, upon the peculiar temperament of the individual, upon his diathesis, &c. In the healthy and continent subject, we again remark that they exert a beneficial effect upon the economy, by freeing it from a source of excitement, and that unless they occur more than once in a night and oftener than once or twice a week, they can scarcely be said to constitute a pathological condition. We have seen patients who have actually thrived and grown stout and hearty, in whom these discharges occurred almost every night.

What the pathological condition of the vesiculæ seminales and of the ejaculatory ducts may be in this class of cases, we have comparatively few means of judging. When a patient dies, in whom these discharges have taken place, the attention at the autopsy is drawn to some other more serious affection, which has been the cause of death, so that the examination of the spermatic organs is almost always neglected. Even in the severest forms of spermatorrhœa, few observations have been made upon the condition of these organs after death, owing chiefly to the amount of care and patience necessary, and to the mutilation requisite to arrive at a proper inspection of the parts, which we cannot well make upon a subject in private practice; and such cases rarely die in hospitals. Where examinations have been made, however, more or less sub-acute inflammation has been discovered in the membranous and prostatic portions of the urethra, and in the ejaculatory ducts—the result, generally speaking, of lesions produced by excessive venery, or masturbation. This is what we might expect.

Involuntary seminal emissions may and do occur in the robust and continent, without any decided cause beyond what we have stated, viz: a certain plethora of the seminal vesicles; but in the majority of cases, upon inquiry we *do* find that their too frequent occurrence is attributable to masturbation, to excessive sexual indulgence, or to effects produced by gonorrhœa; and occasionally to strictures of the urethra. We are inclined to doubt the efficacy of certain other causes which have been supposed to be productive of these discharges, such as the metastasis of old cutaneous eruptions, hemorrhoids, ascarides, horse-exercise, and the use of certain medicaments, unless there is also present a certain amount of morbid irritability in the urethra.

The general effects ascribed to even moderate involuntary

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emissions are various, and greatly exaggerated, nay even fabulous. There is scarce a function in the body which has not been described as becoming perverted by this cause. However, it may be, we must confess that there seems to be a certain relation between these discharges and the mental powers, for we find that patients who experience them are generally more or less misanthropic, hypochondriacal, agitated, and unable to apply themselves to any fixed pursuit. We know that this cannot be the effect of a moderate loss of the seminal fluid, however much it may be the result of *excessive* losses, and therefore are we not to look for the cause elsewhere; in the perusal of certain books, reputed to be medical—the reading of the advertisements of the charlatan, which disgrace so many of our daily newspapers—and in the fondness for conversation upon such topics, always existing in youth? Experience shows us this: we never find that one of these patients comes to us, who, upon inquiry, does not confess that he has read more or less upon the subject of seminal emissions. In the majority of these cases relieve the imagination, and the cure is more than half effected.

In our treatment of simple involuntary discharges, such as we have described, we must act upon the *morale* of the patient, assuring him that the fears of future impotency and insanity which have held possession of his brain are without foundation—that what he has read upon the subject is but the artifice of the quack. To quiet the fears of the "spermatophobist" is to be our first endeavor. Advise him to read no more upon the subject of his fancied complaint, to abandon all vicious habits and erotic ideas as far as possible, and to employ his mind in some engaging pursuit. Above all, assure him that these discharges do not constitute a "drain upon the system," but rather depend upon an excess of sperm, and that if they do occur occasionally they do no serious harm.

Cold bathing, particularly local, in those cases *where a plethoric condition is not manifest;* regular exercise in the open air; attention to diet, and regularity of the bowels; in most cases avoidance of stimulants generally, particularly in the evening, care to empty the bladder before going to bed; avoidance of late suppers; sleeping upon a matrass, with as little clothing as possible to be comfortable; rising at the moment of waking in the morning (for the emissions occur in almost every case at that time); such constitute the most important means by which we are to aid the patient in arresting the too frequent occurrence of these discharges.

With regard to efficacy of certain drugs in these cases, we must confess that we put little faith in their virtues. There are cases where tonics, ferruginous preparations, &c., are no

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doubt valuable; but we think that sedatives are more generally useful. Benefit has been derived from Lupuline, administered either alone or in combination with ergot, either in pill or powder, at the dose of from gr. iv. to vj., two or three times per diem. We have given a scruple of Lupuline in powder on going to bed with excellent results. It should be continued for two or three weeks. We have also derived advantage from ext. hyosyami.

We are inclined to think that some simple medicine should be given in all cases, even where the discharges occur very rarely. The "spermatophobist" must and will have something for his supposed troubles, and if you gratify his whims, it serves to occupy his attention, he feels that he is working out his cure, and that you take an interest in his particular case. Any more active treatment than what we have mentioned is rarely necessary in the class of cases to which we are alluding. Possibly a slight cauterization might be sometimes admissible, or the simple passage of a bougie two or three times a week for the purpose of overcoming any irritability of the urethra. Of course, if stricture should be the cause of the emissions, it should be overcome.

As to the mechanical contrivances which have lately been brought before the public for the cure of seminal emissions, we must say, after considerable experience, that they have failed to answer the purpose intended. They cause too much irritation in the parts, and in many cases doubtless augment the evil.

If our patient contemplate entering upon married life, we should certainly encourage it, and moreover at as early a period as possible.

Such we consider to be the value and importance of a class of cases as they are presented to the notice of our practitioners; cases which, we repeat, in no wise, answer to the description of spermatorrhœa, as given by medical writers, and with which they should not be classed.

We do not deny but that true cases of the milder forms of spermatorrhœa may be sometimes met with among us. So much of our article as relates to spermatorrhœa, we may be induced to communicate at a future period.

Belladonna in Orchitis.—Dr. Rodney states in a letter to the editor of the Southern Journal of Medicine and Surgery, that he has found decided benefit from the use of the ointment of "Extract of Belladonna" applied to the scrotum in orchitis.

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Milk Sickness.—An Address, Read before the Madison county Medical Society. By JOHN S. DEWEY, M. D., *of Troy, Ills.*

Gentlemen,—In accordance with a regulation of this society, requiring a contribution from each member for our mutual interest or benefit, I purpose to communicate the deductions relative to the disease called "Milk Sickness," which a number of years' practice in a locality where it has, from the first settlement of the country until the present time, been peculiarly fatal to the inhabitants, and to such of their domestic animals as are obnoxious to it, has enabled me to draw.

The greatest diversity of opinion prevails on the subject of this disease among numbers of the profession, owing to the want of the means of information. Our text-books do not admit it into the catalogue of human maladies; our medical journals seldom contain even the most meagre expression of opinion of it; and, as the cause which produces it is happily confined to circumscribed and widely separated localities, comparatively few practitioners ever have an opportunity of witnessing its phenomena. Therefore there are intelligent physicians who even doubt the existence of this disease; which has been witnessed or treated by a large number of us. According to the rules of evidence, we can establish the fact that such a disease, sui generis, does exist; by our testimony that we have seen it, *smelt it*, and anxiously watched its singular phenomena, though all the profession beside ignore it.

Its name is furnished us by the unitiated in plain English, and is not inappropriate; for the virus is usually communicated to the human system, and brought to our notice through the medium of milk. The flesh of the infected animal seldom contains the poison sufficiently concentrated to impart its effect by the quantity usually eaten.

The name may also refer to the affinity which the poison manifests for milk. It invariably runs harmlessly through the system of the animal in which this secretion is active; but shows its virulence on the offspring or individual, which takes the secretion into the stomach.

If we prefer the language usually employed in our nomenclature, we have a name sufficiently eupbonic and descriptive, and which I see no good reason to exchange for any other—morbus lactealis, or morbus ab lactæ.

Various theories prevail with regard to the cause of the disease; some attribute it to a malaria which arises from the earth in certain damp and fertile localities; others, to a mineral, the sediment of which may sometimes be seen in stagnant pools, when there is a general scarcity of water; and,

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fortunately for this theory, cattle are driven to these places at the very season of the year when milk sickess is most prevalent—some, to the web of an insect; and others, to a succulent plant, which grows in damp and thickly-shaded bottoms, and bears a white blossom until late in autumn, and which, if not really guilty of the evils attributed to it, is, at any rate, from its habits and association, justly and very generally suspected.

I shall not attempt to refute the various arguments used to prove, that among the first named articles, is to be found the insidious poison; but will briefly state the reasons which have convinced my mind, that it will yet be detected, and demonstrated, in the last named plant. 1st. It is invariably found in this State; in Ohio and Kentucky; whenever milk-sickness is endemic; and in our own county, it is demonstrable, that it flourishes most abundantly in the immediate locations where the disease is most rife. In the latter part of this summer, a friend of mine from Washington county in this State remarked, that he had not seen this plant on his journey to Jacksonville, except in a bottom about a mile south of Edwardsville; and unhesitatingly averred that *there* was milk-sickness. We know the truth of his conclusion, however we may condemn his premises. He emigrated from a portion of Ohio where this disease prevails, and where this plant also flourishes. 2d. I know that all the symptoms of the disease were produced on calves, at two several times, by feeding them with this plant for experiment. 3d. Whenever milk-sickness is endemic, the plant can invariably be found in the vicinity. And during the past unusual season, when the parched scanty vegetation of uplands on our south, drove the cattle from their usual haunts, to the bottoms and ravines, where this suspected plant is known to grow, the disease has been brought to localities where it was before unknown.

This plant is sought with avidity by cattle late in summer, when other vegetation is matured and dry, because it is then in bloom and more succulent. The same peculiarity renders it more easily destroyed by the first hard frost of autumn, when it and the disease cotemporaneously disappear.

Much more concurrent evidences might be adduced, fortifying the same conclusion, and defacing the theories ingeniously framed to prove the mineral or malarial origin of the poison; such as the removing it from certain localities where it was known to exist, by clearing and fencing the lands for pasture. But I abstain from further speculation on this subject; believing from the interest now manifested in the subject, that we will soon be able to point with absolute certainty to the mysterious agent of so much affliction to certain portions of the west.

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I intended to have learned to what class in botany this plant belongs before this meeting, and to have tried some other experiments with it, but have been prevented by procrastination.

The symptoms of milk-sickness at the outset, somewhat resembles those of our autumnal fevers, with congestion of the stomach.

In both there is fever, languor, pain in the back and limbs, with a depressed and feeble pulse, but the similarity extends no further; and if we still persist in classing it among the miasmatic fevers, we are bewildered and annoyed by the inconsistency of the subsequent symptoms.

In the latter, the tongue is pointed and its edges red. In the former we are surprised, with so much gastric irritation, to find it generally relaxed, the villi long, and covered with a white coat, and the edges pallid.

In the latter, the patient complains of a sense of heat and pain in the stomach, which is relieved in some degree by the administration of an anodyne, emollient drinks and counter irritation.

In the former, the distress is more a sense of fulness and oppression, from which little or no relief is afforded by the treatment above; and the practitioner is urged by the sufferer to administer an emetic to remove the imagined accumulation.

In milk-sickness there is a fetor emanated, which is truly pathognominic. It pervades the apartment where the patient is confined; is readily observed by every by-stander; and, when once perceived, is not soon forgotten. It is familiar to the inhabitant of afflicted districts; and when they detect it in a sick room they unhesitatingly pronounce their diagnosis; and no argument or authority adduced by the medical attendant can induce them to change it, or in the least shake their confidence in its correctness. Indeed, their arguments in support of their conclusion would often confound the most learned and sceptical of our profession.

They tell us of our cattle (except their milch cows) affected with trembles, and evident enervation, and having this peculiar fitor, and will often show you a calf in the place where your patient is which had partaken of milk from the same cow, with similar symptoms of enervation and the same odor; or if the calf shows no indisposition, the disease will be developed by actually exercising him about the yard. This I have more than once witnessed, and I cannot believe that conjestive fever, with the peculiar odor, trembles, and enervation of which I have spoken, could be produced for the occasion by exercise. Or they may refer you to their carniverous animals, that have

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eaten of the carcasses of beasts dead of this disease, manifesting the same symptoms and odor.

In autumnal fevers complicated with congestion of the stomach the breathing may be normal, or slightly hurried and short. In milk-sickness it is labored, deep, and difficult, and at times performed as if by a dispairing effort of the will.

The bowels are most obstinately constipated. The surface is moist, and grows more and more cool as the circulation languishes; and unless relieved by proper treatment, the patient either dies from asthenia or remains for years an invalid, subject to a recurrence of all the symptoms, from fatigue or violent exercise.

From these facts I am led to infer, that the poison acts not upon the mucous membrane of the stomach as an irritant to excite inflammation of the organ; but upon the nervous system, in such a manner as partially to paralyze the power of muscular contractibility.

We see this influence in the voluntary muscles, which immediately on the attack, refuse to sustain the weight of the patient, and tremble as if outstrained in the effort. The same condition may prevail with the heart, diminishing the force of its contractions, and with the middle coat of the bowels suspending the peristaltic action, thus producing the obstinate constipation, which is a prominent and very difficult symptom in the disease, and on which possibly depends, the sense of fulness in the stomach, and constant retching.

That the motor portion of the nervous system is susceptible to such an impression as I have here claimed for the poison producing milk-sickness, is proven by well established facts, showing, that certain substances do act specifically upon separate portions of the nervous system; as digitalis in diminishing, or *upas antiar* in suspending the action of the heart; or, as the analogous effect of lead, in painter's cholic.

This view of the pathology will explain more of the symptoms, than any other theory which I am aware of having been advocated and is very satisfactorily corroborated by the *post mortem* appearances of the viscera.

When death occurs within the first few days from the attack, I am credibly informed, there is no trace of inflammatory action, or local lesion whatever. I have never been permitted to examine the human body, but in the carcasses of animals dead of this disease, which I have examined minutely, the only abnormal appearance which I have observed with any degree of regularity was, the utter siccity of the fecal contents of the bowels. I have seen it in the ox so perfectly destitute of moisture that it would readily ignite.

The gall bladder contains healthy bile, often in large quan-

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tity; and is not emptied into the duodenum, owing to the same condition of the muscular fibre of the cist and duct, which holds with the bowels, and prevents their contents from being expelled; but why the absorbents should continue to take up the fluid in the alimentary canal, when the function of the exhalents is suspended, I shall not attempt to explain.*

We are also referred to the nervous system for the pathology of the disease; by the recurrence of the symptoms, from exercise or fatigue, without the re-application of the cause which originally produced them.

Of the treatment I have but little to say. With our present knowledge, we have no antidote to neutralize the poison, or substance which will counteract its depressing influence upon the nervous system; and our only alternative is, to ward off as well as may be, its effect upon certain organs when the danger is most imminent, until the instinctive healing power in the system shall come to our aid, and expel the poison by the emunctories, or persuade the restive nervous system to tolerate its stay.

The first indication then is to overcome the constipation of the bowels. By this we expect to accomplish a double purpose for good; 1st, to relieve the stomach, upon the same principle that it is relieved by reducing strangulated hernia, or removing any other obstruction to their action; and 2d, to open an outlet for the offending matter.

In the first we are generally pleased with the result. I have often known the stomach relieved immediately on the contact of the purgative stimulants, with the extremities of the nerves of the bowels, encouraging their action.

The stomach does not usually complain while the bowels are free.

The purgative which I prefer is the proto chloride of mercury, in 20, 30, or 60 gr. doses; given in mucilage of gum arabic; because its specific gravity makes it retained, while the retching would reject almost any other substance. The only caution necessary in the use of this article is, to be sure to give enough; so that our object may be accomplished with certainty, without danger of producing ptyalism, from which I have never known any good result.

After acting freely upon the bowels, if there are periodical exacerbations and remissions in the symptoms, I give sulphate of quinine in the remissions; but if this periodicity does not appear as is most frequently the case, I am driven to the employment of mere placebos or innocent and as yet fruitless ex-

* Might not the absorbents act under the hydraulic law, by capillary attraction and the vital function of the exhalents be suspended?

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periments, until the condition of the bowels require another purgation; when I repeat the pro. chlo. of mercury in doses as before.

Though the matter ejected from the stomach usually shows an acid re-action, I have never afforded any relief by the use of either, alkalies, or vegetable or mineral acids.

I use vesication over the epigastrium; but with little apparent benefit.

The sheet anchor of my hope in the treatment of this disease is purgation, and the friendly interposition of the vis medicatrix natura.

Thus have I briefly and imperfectly communicated the deductions from my observation and experience in the disease called milk-sickness, which we are more frequently called to treat and therefore have better opportunities to investigate, than our brethren in almost any other locality; and for this reason it becomes peculiarly our duty, to our profession and humanity to ferret out its cause, its true pathology and a proper plan of treatment.—*North Western Med. Jour.*

Death Caused by Watermelon Seed. By B. Rohrer, M. D., *of Germantown, Pennsylvania.*

Major W. of Columbia, Penn., a man of strong and robust constitution, blessed with digestive organs of great power, was addicted to drinking, and being a natural gormandizer, he would swallow any thing placed before him, regardless of the consequences. Fish in particular, a favorite dish of his, he would devour bones and all. During the months of May and June, 1852, he frequently hailed me in the street, stating that he had violent cutting pains in his bowels, but as there was no constitutional disturbance, I simply directed him to take a dose of oil. A few weeks after this, he presented me with the cause of all his troubles; he said he felt something working gradually lower and lower down in the rectum, until at last he could reach it with his fingers and remove it. It was a thin hard bone, 1 inch in length, and ¾ inch in width; its edge slightly serrated, and very sharp; whilst it was passing along the rectum, he had frequent discharges of blood; it was supposed to be the side bone of the head of a catfish.

On the 12th of September, upon my return to the office, I found a message from the major. I immediately called, but was informed that he had been complaining all morning of colic, and had just left in the train of cars, to visit his niece some distance in the country. I heard nothing more of him

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until the 22d, when I was requested to visit him with Dr. Jones, of Bainbridge. When we arrived, he was delirious, muttering to himself—pulse frequent, irregular, small and wiry; abdomen much distended, and tense as a drum; vomiting a vitiated mucus, commixed with bile; extremities cold—death soon followed. Had no evacuations from the 12th up to his death, although all the usual means had been employed.

Post-mortem thirty-six hours after his death.—Abdominal cavty containing a quantity of offensive gas and fecal matter. Gangrene of the ileum near the ileo-cæcal valve, containing 20 watermelon seeds, with the slippery surface destroyed, and adhering firmly to each other, making a strong ball. Also, gangrene of the sigmoid flexure containing over 100 seeds, forming an exceeding hard ball.— *Am. Jour. Med. Sciences.*

Advantages of Operating in certain Cases of Hare-lip at a very early age. By Henry Smith, Esq.

It is obvious in the first place, that an infant with hare-lip cannot so readily take in that nourishment which is offered by nature. If, however, the deformity be remedied, the child will be placed, by the aid of surgery, in a much more favorable condition to receive the nutriment afforded by the mother's breast. It is plain, too, that the deformity excites most unpleasant and painful sensations in the mind of the mother and those around her; and, if the source of this anxiety can be removed at once, it is of great importance that it should be accomplished.

A third argument in favor of very early operation for hare-lip consists in the circumstance, that as the growth of the child is very rapid in the first period of life, the lip, with other structures of the body at this time, becomes more fully and fairly developed, and thus, after an operation has been successfully performed, there will be a much less chance of subsequent deformity in the part. But it is in those instances where the hare-lip is complicated with a more or less extensive fissure in the palate that an early operation for the cure of the former is so imperatively demanded, and is attended with some beneficial results; and it is to this point especially I wish to draw attention, because, although in some recent works of surgery an operation at an early period after birth is recommended, (and I may especially allude to the *Practical Surgery* of Prof. Fergusson, and to the *Surgeon's Vade Mecum*, by Dr. Druitt.) the most important reason for such a proceeding is not alluded to. And I now refer to the effect which is pro-

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duced upon the fissure in the hard palate by the approximation of the edges of the lip. As long as the hare-lip remains in its primitive state, there can be no pressure upon the hard tissues underneath; but, if it be united by the surgeon, a considerable amount of pressure is exerted upon the cleft in the palate; and, in a child aged only a few days or weeks, the bones are so soft and compressible, that they are to a great extent influenced by the pressure which constantly obtains, and in the course of time the fissure becomes either entirely closed or diminished in size to one-third or one-fourth of its original extent.

I have had various opportunities of noticing this effect in instances where a very early operation has been performed for hare-lip, complicated with more or less extensive fissure in the hard palate; and so convinced am I of the importance of performing the operation as soon after birth as possible, that I invariably recommend it. And it has fallen to my lot to be called upon to perform the operation very soon after birth, where there has been, at the same time with the hare-lip, considerable malformation of the palate; and I have been able to notice the result some length of time afterwards. More than three years ago I operated upon an infant only four days old; here there was an extensive fissure extending through the hard palate into the nostril. I had an opportunity of seeing this child only a few days since, and the opening in the front portion of the palate was closed up. In this case the soft palate was extensively cleft, and that still remains open; but the parts altogether are in such a condition that, some years hence, they may be completely closed by staphylorraphy. A few weeks since a little patient was brought to me, on whom I operated at a very early age, two years old. In this instance there was a fissure in the hard palate, and great deformity of the jaw, a portion of which I removed at the time. There is now an admirably developed upper lip, and complete closure of the opening which existed in the palate. In another instance, where I operated at an early period, there was an immense chasm running through both the soft and hard palate into the nostril. I had an opportunity of seeing this patient a few days since, and found that the anterior portion of the cleft was much diminished in size. The operation was done more than a year ago.

Mr. Bateman of Islington, who pays great attention to this matter, operated, three years since, upon an infant only four hours after birth. In this case there was an extensive fissure in the palate. This gentleman kindly showed me this case, and, in reply to my inquiry regarding the effect which the operation had upon the palate, he wrote word the other day

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that the child had died of whooping-cough last winter, but that its mother remarked that before death the fissure, which had at birth been "so large that she could put her thumb into it, had contracted so much that it would scarcely admit the edge of a sheet of writing paper." About a month since I operated upon an infant only six days old, with perfect success. In this case I was partly induced to perform the operation at this early period because there was a fissure in the hard palate, extending into the nostril. I have little doubt that, in time, if the child lives, the fissure will be completely closed.

[*Med. Times and Gazette.—Western Jour.*

An Unruptured Hymen, at the full term of Utero-Gestation. By H. Gatch Carey, M. D., *of Dayton, Ohio.*

Madam ——, æt. 20 years—nervous and sanguine temperament—healthy—married sixteen months; menstruated the last time May 4th, 1854—was taken in labor February 1st, inst., at three o'clock, A. M., and delivered by the first vertex presentation of a female child, weighing 7½ lbs., at half past three, P. M., of the same day. I saw her during the first stage of labor. An examination *per* vaginam disclosed to the touch an elastic membrane, situated an inch and a half within the canal, having its entire circumference attached to the walls of the vagina, forming a perfect partition in the channel. It was flaccid, and capable of considerable distention, which enabled me to determine the presence of the head in the pelvic straits. I was not able, with the index finger, by pressing in the direction of the promontory of the sacrum, to put it perfectly upon the stretch.

As labor progressed, I made out the character of the cephalic presentation through the partition, and yielding os uteri, the latter of which was dilated one and a half inches in diameter. The posterior fontanelle and sutures could be distinctly felt. The "bag of waters" was readily recognized, protruding beyond the os during each pain, and were finally ruptured in the operation of dividing the hymen.

The descending head eventually came firmly in contact with the partition, rendering the latter more tense by each successive throe. The uterus had now receded beyond the range of the finger, and the membranes and hymen were drawn like a cap over the presenting vertex, which had descended to a line with the labia minora. The pains were short, and recurred at brief intervals. The expulsive powers of the uterus appeared to be failing, and the head had ceased to advance.

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In my examinations during the first stage of labor, I sought with some care for the usual opening in the hymen, but failed to detect it; and as the occiput descended and put the opposing parts upon the stretch, my explorations were more minute and thorough, but without any better success. When thus distended by the head, the hypertrophied membrane presented an irregular, columnar surface to the touch. The floor of the intervening sulci in many places appeared exceedingly delicate, having walls on either hand, distinctly elevated, and rolled under the finger in the absence of pain.

I made frequent ineffectual efforts during the progress of the case, to rupture the hymen with my finger, and I now resolved upon the use of the knife. By means of a round pointed gum lancet, I effected a small incision through it, which was, by the introduction of a hernia bistoury, during the existence of a pain, carried from the symphysis over the head of the child to the perineum of the mother. The operation was not attended by any considerable pain or hemorrhage. The maternal soft parts were relaxed, and in a condition favorable to the speedy expulsion of the child, which was soon accomplished after resistance was removed by the incision. By gentle traction upon the cord, and firmly grasping the uterus, the placenta was extracted in four minutes after the division of the umbilical cord. The patient lost about eight ounces of blood. Labor lasted twelve and a half hours. Delay was occasioned in this case, *first*, from the waters not having been evacuated at the appropriate time, and *second*, from resistance interposed by the hypertrophied hymen.

Cases of unruptured hymen are rarely met with at the termination of pregnancy, by the accoucheur. The annals of obstetrics furnish but few instances. Churchill, in his "System of Midwifery," does not allude to the subject. Meigs has met with two cases. Ramsbotham directs the manner in which they are to be met. Dewees has seen such, and believes that impregnation can take place when the hymen is imperforate. Although I was unable to detect the existence of an orifice, in the above case, yet, to my mind, an opening prior to fecundation, is clear.

Madam —— had menstruated regularly and without difficulty, from puberty up to the 4th of May last, which fact of itself is conclusive evidence of the presence of an orifice. It must have been small, or possibly may have closed since conception, otherwise I would have detected it. I believe that the dense nature of the tissues entering into the formation of the hymen, in this instance, would have proved an insurmountable obstacle to the successful issue of labor, unassisted. Copulation had never been perfect, and Mr. —— had satisfied

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himself, in more ways than one, of the presence of a hymen, and of its indestructible nature. Laboring under the impression that conception could not take place as long as the above impediment was in existence, he sought my advice in reference to the condition of his lady, immediately upon the first disappearance of the menstrual flux. There was no disturbance of the general health, and as I could not trace any other than legitimate causes for the interruption, I advised a *tentative course.* The results have been gratifying to all parties concerned—especially the mother.—*Medical Counsellor.*

Early Exercise in Hip Disease or Coxalgia. By E. S. Cooper, M. D., *of Peoria, Illinois.*

My attention was first called to the benefits of early exercise in coxalgia by the following case, two years since.

Case.—Master John Fear, aged nine years, was attacked in the spring of 1852, with pain in the knee, which continued for some weeks, when it was ascertained that the seat of disease was in the hip, and his physician had him confined to bed, and kept in this position from the 1st of May to the 27th of June, when he was admitted into my institution.

I found him in the following condition: much emaciation; pain in the knee and hip; the foot of the diseased side projected two inches beyond the other, when they were placed side by side. Pressure on the heel produced an immediate reference to pain in the hip-joint.

Having already witnessed the benefits of early walking in white-swelling, the great relief from pain which exercise gives in these cases after the inflammatory symptoms have been principally subdued, and its invigorating influence upon the general health, I concluded that, inasmuch as keeping the joint quiet was the only object in confining patients to bed, generally, who have this disease, an apparatus might be devised which would secure the quietude of the diseased parts, and, at the same time, permit the balance of the body to be exercised, and which I was able to effect by a proper machine.

From the period of its application, the patient was more comfortable, particularly during the night. In fact the change was very striking, so much so, that from the most painful, sleepless nights, he passed to complete quietude during that period, interrupted by occasional paroxysm of pain, which were readily relieved by an opiate. With this apparatus I could abduct the head of the thigh bone to the extent desired, and, by thus securing the ulcerating articular surfaces from

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pressure upon each other, and keeping the thigh bone from motion, while with the leg held in a state of flexion, the patient could exercise on crutches without the least detriment to the diseased limb.

The general health improved very rapidly, and the appetite became good, while the little fellow began to pass his time quite happily. About this period, however, his father removed him from town. I learned subsequently that he continued to improve after leaving me, and though I am unable to state whether he ever recovered entirely, I think no case occurring in my practice ever gave me more satisfaction at the time.

Since that. I have treated several other cases with similar results, and though some circumstance in each case has prevented me from witnessing the course throughout, there were none in which the patient did not begin to improve upon the application of the abduction splint. With one on the third day, he was able to press the foot of the diseased side upon the ground in walking, a movement which he had been unable to make for months previously. This case was Jotham Lyons, of Fulton co, Illinois, aged fourteen years, who had been attacked about seven months when he was admitted into my institution. I shall not give a history of his case in detail. Suffice it to say, that, though the symptoms progressed slowly, the disease had gradually advanced from the commencement, until after the application of the splints, since which he has been steadily improving up to the present period, June 16th.

[*Trans. of Ills. Med. Society—Medical Counsellor.*

On the Remedial and Anæsthetic Uses of Intense Cold. By James Arnott, M. D., *of London.*

As no remedy has been longer in use, and few are more valued than the local application of moderate degrees of cold, or a temperature ranging from that of dissolving ice to about 70° of Fahrenheit, it may at first appear singular that a greater or more powerful remedial effect should not have been sought by increasing the dose of the agent, or employing the lower temperature, in the same manner as we have sought and found much greater remedial benefit in many cases by using mercury, antimony quinine, and other drugs, in larger doses than had been customary. The reason is that medical men were under a most erroneous impression respecting the effects of very low temperature of zero stops the circulation, and because the vitality of a part has been lost by its *long-continued* congelation, whether caused by exposure to severe cold in

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winter, or by the incautious use of ice in hernia and other diseases, it was hastily and erroneously inferred that there was danger of loss of vitality from *short-continued* congelation. The mistake would not be greater to infer from the fact, because a long-continued stoppage of the circulation through a limb from an improper application of a bandage has occasioned gangrene, that it would be dangerous to use the tourniquet in operations.

The correction of this error will be deemed of no little importance, when it is considered that in short-continued congelations, judiciously applied, we have an unfailing means of immediately arresting inflammation wherever it can be reached by the remedy; of not only giving speedy relief from pain in many diseases, but in consequence of the organic changes produced by it, of obviating the return of pain and in malignant disease, of producing an amount of benefit much exceeding that yet accomplished by other means. Although much inferior in importance to these results, it is yet another great benefit conferred by intense cold, that the pain which would be otherwise caused by the greater number of surgical operations can be prevented by it with perfect safety; and not only can pain be prevented, but the inflammation proceeding from the surgeon's knife, that so often proves fatal, may also be obviated by the same means, and with almost equal certainty. It will be proper to consider the remedial and anæsthetic effects of intense cold separately; but before doing so, it is necessary to mention how this degree of cold is produced and applied, as well as to attempt an explanation of its mode of operation.

The degree of cold may be called intense which immediately benumbs the part to which it is applied, speedily stops the circulation through it, and congeals the adipose matter. I have usually produced these effects by placing what are termed frigorific mixtures, either immediately in contact with the skin or mucous membrane, by means of a net of thin gauze containing them, or by allowing them to act through thin bladders, or metallic vessels of appropriate form; but there are various other ways of effecting the same object, some of which are preferable for certain purposes. Substances passing rapidly from the solid to the fluid, or from the fluid to the aeriform state, strongly abstract caloric from other bodies in contact with them; and substances, either solid, fluid, or aeriform, already sufficiently cooled by artificial means, may be placed in contact with the part; the first, as solid metalic balls of appropriate shape; the latter two, when forming strong currents. When cold is produced by the common frigorific mixture of ice and salt, and applied by means of a gauze bag or net, the following is a convenient mode of proceeding:—

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If the congelation is not to be extensive or long-continued, a piece of ice of the size of a large orange will be sufficient. This is well pounded in a coarse cloth or bag, and the powder being placed on a large sheet of paper, is thoroughly mixed, by means of a paper-folder, with about half its weight of common salt. The mixture is then put into a net of about four inches diameter, and as soon as it begins to dissolve, it is ready to be applied. The net is not kept motionless on the part, but is frequently raised in order that fresh particles of the mixture may be brought into contact with the skin; and the water that escapes from it may be absorbed by a sponge, or be allowed to fall into a basin placed underneath. If the surface to be acted upon is of small extent, a very thin and large copper spoon containing the mixture, or a solid brass ball of about a pound weight, which has been immersed in ice and salt, will often answer, and be a neater mode than the net.

The moment a gauze net, or a thin metallic vessel containing ice and salt, is applied to the skin, it is benumbed. There is hardly a sensation of cold produced, and no tingling or smarting. If the contact of the frigorific be continued a few seconds longer, the surface becomes suddenly white, in consequence, doubtless, of the arrest of the circulation; and this change of color is attended with a slight smarting like that produced by mustard. There is now complete anæsthesia, which, if the frigorific were removed, would remain complete for several minutes. But if the frigorific be allowed to act, another change is produced—the adipose matter under the skin is congealed, and the part becomes hard as well as white. The depth to which the benumbing influence of cold will extend depends upon a variety of circumstances, as the degree of cold, the duration of the application, the vascularity of the part, whether pressure is used or the circulation is suspended, &c., &c. After the usual application of cold for anæsthesia, the circulation soon returns to the part, and the skin assumes a red color which lasts for several hours. If the congelation has been considerable, there is now some smarting felt, unless the natural heat be more gradually restored by pouring cold water on the part, or by placing on it a little pounded ice, or a bladder containing iced water. If the application has not exceeded the first stages, there is no smarting, and no necessity, therefore, for such precautions.

The redness produced does not, as might at first sight be supposed, indicate an inflammatory condition, but the very reverse. The tonicity of the small arteries appears to be lessened or suspended for a time, and instead of being inflamed, the part is rendered unsusceptible of inflammation. Parts cut after congelation heal by adhesion or the first intention more

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quickly than they otherwise would; and, as has already been said, we possess in this expedient a certain and prompt remedy for every inflammation accessible to its complete influence.

Remedial Uses of Intense Cold.—The remedial qualities of intense cold may be described as antiphlogistic, anodyne or sedative, and specific; and it is useful in the diseases for which other remedies possessing these qualities have been employed, viz: in inflammatory, painful or irritative, and malignant diseases. The circumstance which limits its application in these, is the impossibility of extending its influence beyond a certain extent, or depth, although it is certain, from its effects in a deep seated disease, that this influence, whether it be direct or sympathetic, is more extensive than would at first be supposed. It may be laid down as a rule, that in every case in which the local application of moderate degrees of cold has been found of service, the use of well-regulated congelation would prove much more useful; and in those diseases of similar character, in which moderate cold has not been employed from the idea that their seat was beyond its reach, congelation might be tried with reasonable hope of success. Intense cold has this immense advantage over other powerful remedies of the same class, that it may be used with impunity—if it does no good it will do no harm. Who will venture to affirm this of bleeding, mercury, antimony, opium, chloroform, arsenic? Neither in my own practice, nor (so far as I can learn) in the practice of others, has there been any untoward result from the use of congelation. Its action being confined to the diseased part, and not uselessly expended on the rest of the system, affords the explanation. Other topical remedies have much the same character for safety, but what other expedient of this class has a tenth part of the power of intense cold?

Instead of enumerating the diseases in which this agent has been employed according to the above classification, I shall mention, first, those in which it has been more or less successful; and, secondly, those in which it might, reasoning from analogy, be tried with hope of advantage. In administering intense cold as a remedy, the common or a more powerful frigorific has been generally applied directly to the part, or with the intervention only of the thin gauze containing it; and the duration of the congelation has been from one to ten minutes.

In the spring of the year 1849, I requested the house surgeon of the Brighton dispensary to apprise me of every case of acute lumbago that came under his notice, and, in all of those, amounting to nine, I employed congelation with perfect and permanent success. The net containing the ice and salt was passed to and fro for five minutes, over a surface of about eight by four inches, the skin being blanched during the whole of

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this period. In only two or three cases was it necessary to apply the remedy twice. Several of the patients rose immediately afterward from their beds to which they had long been confined. In most cases of chronic rheumatism, the remedy has been equally successful; and this, on account of the frequency of the disease, is one of its most valuable applications. Sciatica has generally yielded to it, but by no means so easily. In acute rheumatism, the local inflammation of the joints is, by this means, invariably and completely relieved, and that portion of the accompanying fever thence arising, is consequently removed. The disease, thus treated, will run a painless course of about a week's duration. In no case, of about a dozen, in which congelation was almost exclusively employed, was there extension of inflammation to the heart; and I am persuaded that the best plan of preventing this, is to subdue the inflammation of the joints from which it generally originates. I did not use the remedy in cases where the heart was already affected, though I have since learned that congelation is employed in the hospital at Vienna (where it was introduced some years ago by Dr. Waters, of Chester,) as an application to the chest in rheumatic carditis. That this affection of the heart would occasionally occur during the treatment of acute rheumatism by congelation is very probable, because it often arises, as the same affection of the joint does, from a morbid condition of the blood over which the remedy can have no control; and that such an occurrence, in the present feeling on the subject, would be called metastasis from cold, is very certain; but I am convinced that it will yet be acknowledged, though probably after many years, that this affection would be much decreased in frequency by the adoption of any means capable of quickly subduing the accompanying arthritis. When it is considered what an immense amount of eventual mischief arises from the organic disease of the heart that occurs under the common modes of treating rheumatic fever, to say nothing of the patient's present sufferings, and tedious confinement, it is to be lamented that prejudice should oppose any measure of greater promise. In rheumatic gout the relief has been as marked from congelation as in lumbago. In ordinary inflammation of the joints it has also been exceedingly useful. Ophthalmia has been immediately cured by keeping the frigorific in contact with the gently closed eyelid for three or four minutes. Glandular inflammation in the neck and groin, yield to a high degree of cold with equal facility. I have been told that in orchitis, its beneficial operation is immediate; and I have little doubt that, from its closeness to the surface, the urethral inflammation causing orchitis, would be quickly suppressed. Congelation has often at

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once converted an irritable into a healing ulcer, though sometimes the patient has complained of the pain of the operation; it is probable that had the salt in the mixture been prevented coming in contact with the irritable surface, this would have been in a great degree prevented. Certain acute inflammatory affections of the skin are equally under its influence, as erysipelas, eczema, impetigo. It has not often failed in prurigo, but in only one case of psoriasis has it appeared to be of service. Painful nodes are at once relieved by this means, and the inflammation subdued. I have only used congelation in carbuncle as an anæsthetic previously to cutting it, but it is probable (judging from its effect in severe boils) that the incision might have been dispensed with. It has been mentioned to me that severe cold has been employed with the same view in whitlow, of which it is certainly a sufficient cure. The inflammation following sprains, contusions, and other similar injuries, is perfectly under its influence; and the same may be said of burns. In one of my publications on the subject, I have related the excellent and speedy effect of congelation in a case of meningitis, and also in a case of peritonitis; I have not had the opportunity of trying it in other affections of this description. Headache of various kinds has at once yielded to the application, for a minute, of a frigorific over the painful part; and in neuralgia affecting the side, it has generally proved efficacious. In neuralgia attacking the face and other parts, it has often succeeded and often failed. If the seat of the disease be deep in the brain, little can be hoped from this remedy, although there are few obstinate cases of neuralgia in which it does not deserve a trial. Toothache is generally at once relieved by it if properly applied; and there is no remedy for the painful affection of the mouth caused by mercury comparable to congelation. A spoonful of dissolved ice and salt is repeatedly put into the mouth, until it becomes benumbed. In one case of severe scurvy of the gums, where I feared a loss of the teeth, extensive congelation of the gums immediately arrested the disease.

In many of the diseases just enumerated, the promptness of the cure is as remarkable as its certainty. In military and hospital practice this advantage is very prominent.

In cancer the effects of congelation have been various. From my own experience, and that of others, I think that in its early stages, and when from its size the tumor can be thoroughly brought under the influence of the remedy, it will be cured by it. In all stages the progress of cancer will be arrested or retarded, and the pain accompanying it assuaged. The difficulty in advanced cases is to cause a sufficient degree of cold to pervade the tumor. The French translator of a recent pa-

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per of mine on the subject, ('L'Union Medicale,' for May), thinks that the frequent occurrence of cysts in cancerous tumors may facilitate this. But if layer after layer is acted upon, it may be enough. In cancer of the womb the frigorific is applied by means of a speculum, and one stronger than ice and common salt will generally be required. The opinion of Dr. Hughes Bennett respecting the nature of cancer have much influenced the mode in which I have used congelation in its treatment. M Velpeau states in his recent elaborate work on diseases of the breast, that he has employed *long-continued* congelation as a substitute for caustic in cancer; but of this effect of the agent I have no knowledge.

There are other diseases in the treatment of which severe cold would probably be very useful. It might be applied with such a hope to the spine in tetanus, or to the scalp in certain varieties of mania. After gunshot, and other severe wounds, it would prove a powerful preventive and cure of inflammation. Even in pleuritis, and other deep-seated inflammation of the chest, as well as in various uterine affections, benefit might rationally be expected from it. In two cases of epidemic cholera, I administered a succession of draughts of a temperature of about 25 deg. Fahr., with apparently excellent effect; and I cannot doubt that the application of cold to the interior of the stomach which, as appears by the recently published report of the College of Physicians, is the only treatment of cholera which has been unanimously approved of, has not been carried far enough. If the irritation of the mucous membrane be considerable (as it must be to account for the exhausting and fatal discharges), the temperature of ice merely is not sufficient to subdue it.—*Month. Jour. of Med Science.*

PART IV.

EDITORIAL.

OUR JOURNAL.

It affords us pleasure to state that the course pursued by the publishers in reducing the price of subscription to our Journal has had the desired effect of extending its circulation. Since the commencement of the present volume we have added not less than fifty new subscribers to our list, and they are constantly coming in. We hope, however, that our friends

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throughout this and the adjoining States will not relax their exertions, but will continue to send us not only subscribers, but also reports of their interesting cases, and short communications, on medical subjects.

At the late meeting of the Medical Association of the State of Missouri, a resolution was unanimously adopted, recommending to the profession in this State to rally around the St. Louis Medical and Surgical Journal, and make it their organ and the channel for their communications. This resolution we will publish so soon as the proceedings of the Association come to hand.

ST. LOUIS MEDICAL COLLEGE.

Agreeably to an act passed at the last session of the Legislature of Missouri, the Board of Trustees and Medical Faculty, of what was formerly known as "The Medical Department of the St. Louis University" have organized under an independent charter, and the institution will hereafter be styled "The St. Louis Medical College." For particulars, see advertisement on the cover.

STATE MEDICAL ASSOCIATION.

The fifth annual meeting of the Medical Association of the State of Missouri was held in the town of Lexington, on the 10th of April last. The number of delegates in attendance was by no means large, nor were there many reports presented, yet the meeting was an agreeable one, and we have no doubt will result in good. Dr. John B. Alexander, of Lexington, was elected President. That which to us was most of all encouraging was the spirit of determination manifested by all present to return to their respective homes and labor assiduously to bring about a thorough organization of the profession which shall extend to every county in the State, so that the future meetings may be made to represent the entire medical profession of our State. In order the more

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effectually to accomplish this object, a central committee was appointed to bring this subject home to every physician by means of a circular letter. Upon the action of this committee, and the effects growing out of it, will depend, in a great measure, the perpetuity and usefulness of the Association.

We had not previously had an opportunity of visiting that beautiful and fertile portion of our State, and aside from the pleasure of meeting our professional brethren, we were more than compensated for the trip, by the gratification it afforded us. With Lexington and its environs we were particularly pleased. For the fertility of its soil, the hospitality of its citizens and the intelligence of its physicians it is not surpassed by any section of country that we have ever visited.

We had hoped to be able to publish the proceedings in full in the present number of our Journal, but they have not yet come to hand, and must therefore be deferred until our next.

The next meeting of the Association will be held in St. Louis, on the 2d Tuesday of April next.

THE NASHVILLE JOURNAL AND OURSELVES.

In the January number of our Journal, we published a short editorial article in which we spoke in terms of merited censure of the bombastic braggadocio and digusting egotism, which for some time past have characterized the editorial notices and published addresses of the editor of the Nashville Journal of Medicine and Surgery, whenever allusion has been made to the Nashville school, with which the editor is connected, and of which he seems to be the chief fugleman. This article, it seems, has excited the wrath, and stirred up to the very bottom, all the latent passions of the aforesaid editor. After an incubation of more than two months, he has at length come out in his last issue with a characteristic editorial reply, covering *seventeen and a half* pages of his precious Journal, and which for bad taste, bad temper and inimitable balderdash, we venture to assert surpasses any thing which has heretofore appeared in the annals of American journalism. Judging from the effect produced, we must have touched the

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editor in a peculiarly tender spot, for verily, the "galled jade" has winced most terribly.

But, instead of thanking us as he should have done for our wholesome correction, he has changed the issue by making a furious assault on the Medical Department of the St. Louis University.

This long and labored philipic sufficiently answers itself, and the base temper and worst taste which it displays must necessarily recoil on the author, and ultimately do him far more injury than those against whom it is directed. We do not therefore purpose to do more than briefly to correct a few of the misstatements and misrepresentations with which it abounds.

In the first place, then, we would inform the editor, that the St. Louis Medical and Surgical Journal is a private enterprise, and not the organ of the Medical Department of the St. Louis University, nor of any other Medical College, and that the article under which he writhes so pitiously, was written by us in our capacity as editor of this Journal, and that the Medical Faculty with which we are connected had no more to do with it, and are no more responsible for its contents, than the Faculty of the University of Pennsylvania, or any other similar institution. We submit it, therefore, if the savage attack of the editor on the St. Louis University is not as gratuitous as it is malignant. He might with equal propriety have assailed the Medical Society to which we belong, or the State Association, over which we once had the honor to preside—except that it would not have answered the selfish purposes of the editor quite so well. But fortunately the ability of the editor to injure the fair fame of the St. Louis University bears no proportion whatever to the disposition which he has manifested to malign her, and she can well afford to laugh at, and defy the petty jealousy and unmanly spirit which have called forth this attack, feeling conscious that her proud future will not in the slightest degree be affected by such puerile assaults.

In the numerous extracts taken from the annual announcements of the St. Louis University, the editor well knows that there is only a simple statement of the facilities which St. Louis possesses as a point for medical instruction—in the way

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of hospitals, dispensaries, anatomical material, and the like—such as are common in all publications of the kind, without setting up any claim whatever to superiority over other cities where like facilities exist; that there is no appeal to sectional prejudices, no disparaging allusions to other institutions, no boasting of unrivalled success, no bragging of a "determination" on the part of "ourself and colleagues" to make our "college the first in numbers and respectability in the United States." In fine, that there is an entire absence of that inordinate puffing and self-laudation for which the Nashville editor has become so notorious. As proof of this, (and it is a remarkable admission) the editor himself, after a long extract from our circular of last year, remarks: "We have not quoted this to find fault with it, but merely to show that the "*points*" are by no means neglected." Now, if there be no impropriety in setting forth these "points," especially when it is done in such a manner that the Nashville editor himself cannot find fault with it, where, pray, is the great offence committed; and what becomes of the wonderful parade the editor has made in bringing forward these numerous extracts from our circulars? "Consistency thou art a jewel."

It is true, there is no disputing about taste, and least of all, would we be disposed to undertake any thing of this kind with the Nashville editor, after the specimens of his refinement which we have seen; but really we cannot perceive either the wit, or the point, of the long rigmarole about the circus which the editor has detailed with so much minuteness, except it be designed to exhibit his perfect familiarity with all the doings and sayings of the "spotted man" and his striped companions. He is certainly *au fait* in all the details of the circus, and would seem to be quite at home in the "ring," but how he came by his information, or what part he himself has been accustomed to act, he does not inform us.

But we are charged, it would seem, with ingratitude, as the head and front of our offending; for, in speaking of us the editor says: "We have praised his school, praised his magnificent city, praised the introductory lectures in his college. In return, he sneered at our introductory lecture, because of its prophecy, and now sneers again, because we show that what

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occasioned his first sneer is a fixed historic truth—and these sneers constitute his notice of "us and ours."

In the praise bestowed on "us and ours," by the editor, it is fair to presume that he spoke his real sentiments, and that too, when all the evidence which he now pretends to parade against us was before him. But if the course pursued by "us and ours" was really blameworthy, why did he praise us? and if not, why does he now assail us? We leave the editor to answer these questions as best he can, but the public will not fail to perceive how little value is to be attached either to the praise or censure of one who is evidently governed by no fixed principles in the one case or in the other.

It is true, we did ridicule the editor's address, and his editorial puff, and for the simple reason that they were superlatively ridiculous, and were so regarded by every one that we have ever heard allude to them, and while he continues to write such articles, and put forth such addresses, we must continue to ridicule them until our taste shall have become as vitiated as his—which may Heaven fo bid. We have never, however, ridiculed nor "sneered at" the Nashville college; on the contrary, we have on more than one occasion spoken well of it, and are not now disposed to hold the institution responsible for all the bad taste and imprudent boasting of the editor. What we did condemn, and what we must ever demur to, is the grand and lofty boasting, and enormous puffing which has uniformly characterized the editor's notices of his college. Had he pursued a different course, he would have found us as ready and willing to applaud his enterprise as any one else. In the bestowal of our praise, as well as in our censure, we are governed by principles of right and justice, and while the former is far more in accordance with our feelings than the latter, yet, we cannot on that account, nor yet because the editor has seen fit to praise "us and ours," be induced to approve of such outrageous violations of propriety and professional modesty as the editor has been guilty of.

It seems to us, moreover, that the course of his cotemporaries of the medical press should have taught the editor a useful lesson on this subject, for he himself says: "Not a Journal south or west has noticed us but to abuse, save one, and that

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one was independent of colleges." But we fear that the editor is incorrigible,; for after all, he informs us, that if what he has said be considered boasting, "then our reply is, WE HAVE A RIGHT TO BOAST." We shall certainly not discuss this point with the editor, but granting his premises for the present, we must at the same time insist on our "right," and that of the rest of mankind to laugh at his gasconade to our heart s content.

As another evidence of our ingratitude, we are charged with copying articles from his journal without due credit. In speaking of us, the editor says, "in his September number, he takes no less than twelve articles from the Nashville Journal, consisting of translations made by our co-editor, condensed extracts, and selections from our exchanges, foreign and domestic, without even condescending to acknowledge to his readers the source whence he obtained them."

In reply to this charge, we wish first of all to say, that if at any time an article has appeared in our columns without credit being awarded to the journal from which it was obtained, the fault has been the compositors, as we have always endeavored to be particular in reference to this point. We are in the habit, however, of throwing together under the head of "Medical Miscellany," short items of news, gathered from all the sources within our reach, without credit otherwise than labeling them—"Scissors and Pen."

Now in reference to the "twelve articles," we have examined the September numbers of our Journal. for 1853–'54, and in neither of them is there a single original article taken from the Nashville Journal. In the September number of last year, there are three short articles, which from the neglect of the printer, are not credited to any one, the rest are all set down to the journals in which they originally appeared. What then becomes of the twelve articles alluded to? "We hope this was an oversight."

As to the "rays of science" being "conveyed to that point," &c., it seems to us, that any one less dull than the editor, would readily have perceived this to be a mistake in the print, and that it should have read, "rays of science converged at that point"—but this is a small matter.

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One more extract will close our notice of this most remarkable effusion, and we refer to it for the purpose of recording the opinion of the editor on the important subject of clinical instruction. Speaking of the Hospital advantages in St. Louis, he breaks forth as follows: "You may humbug the people with your long-winded folly about Hospitals, as the pill gentry do, but the *doctors* know better. They know all your gasing about them is arrant humbug. They know that Medical Colleges are devoted to *elementary* teaching, and that the subjects are so long, and the sessions so short, that they cannot do that as it ought to be done. They have been to College themselves, and know all about these things. Students have no time to attend Hospitals, and a large medical class pouring into a Hospital already filled with patients is an absurdity. To the graduate before beginning practice, Hospitals are inestimable. We have two Hospitals here that have always been open to us, and in the beginning we did honestly believe that we could make them useful. But we soon learned better, and with equal candor taught the students so. We would not, for any advantage to the under-graduate, give five cents to have the Pennsylvania Hospital next door to us, with the exclusive admission to its wards."

So it would seem, that after all, clinical instruction is a humbug, and of no use whatever to the under-graduate!! The National Medical Association should forthwith back water on this subject; for in its ignorance and folly it has represented and recommended clinical teaching as of paramount importance, but the Nashville editor says otherwise. The question is settled. A student should be graduated before he is permitted to enter a hospital, upon the same principle, we presume, that a youth should be taught to swim before he is allowed to go into the water. There may, however, be those who are so unreasonable as to retain their former opinions in reference to clinical instruction, and to such the question may arise—which is the real humbug, clinical instruction, or the teacher who can write such an article?

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UNIVERSITY OF MICHIGAN.—PROFESSORSHIP OF HOMŒOPATHY.

The Medi al Department of the University of Michigan is one of the few medical institutions in the United States, under the fostering care of the State. Its professorships are all well endowed, out of the munificent fund set apart by the State for educational purposes. The professors are elected, and the institution managed by a Board of Regents, appointed by State authority. Tuition is free of charge, and the salaries of the professors fixed and sure, whether the number of students be many or few, thus rendering the faculty independent in the exercise of their high functions. In other words, the institution luxuriates in all the advantages which are supposed to flow from the benign influence of State patronage. A condition, which some of our cotemporaries, and most writers on medical reform seem to regard as of all others the most desirable, and which they suppose is all that is necessary to place medical education in this country on the same elevated platform which it occupies in European countries. But unfortunately for the advocates of this system, its practical operations are not likely to prove as satisfactory as was anticipated; and the embrace of the State, like that of the bear is likely to prove too cordial to be agreeable.

From divers sources, we learn, that the legislature of Michigan at its recent session enacted a law, requiring the Board of Regents to appoint a *Professor of Homœopathy* in the Medical Department of the State University. As this is an age of progress, and as a State institution should be made to reflect the sentiments, and carry out the wishes of the people, perhaps the next legislature may require the Board to establish a professorship of Hydropathy also, and instruct them to secure the services of the renowned P. T. Barnum in that department!

We confess that we are not at all surprised at this action of the Michigan legislature, indeed it is just what might have been anticipated, and we allude to the subject only for the purpose of reiterating what we have all along said, that the medical profession in this country has nothing to hope from the action of the State, and that whatever is done to advance the

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interest of legitimate medicine, or to guard the honor of the profession, must be accomplished by the profession itself. This is as clear to our mind as a demonstration. Every attempt which has yet been made to legislate for the benefit of our profession has proved worse than useless, and this must necessarily continue to be the case in a government like ours. Take for illustration these States in which Boards of Examiners have been established with the exclusive power to grant or withhold licenses to practice medicine, and what has been the result? In every instance they have proved miserable failures, and have been abandoned as worthless. And yet we constantly hear the cry, "give us Boards of Examiners and all will be right."

The truth is, the difficulty is not in the want of laws, prohibitory or protective, but it grows out of the fact that the people in their ignorance and stupidity prefer quackery, and while such is the case the law will not, and cannot suppress it.

For ourselves, we neither expect nor desire any thing at the hands of the legislature, and all that we ask is, that they let us alone, and leave us to manage our own affairs in our own way. At present our profession suffers far more from *regular*, than from *irregular quacks*, and if as a body we will purge our own ranks of the former, the latter can do us but little or no harm.

P. S. Since writing the above, we learn from the Peninsular Journal of Medicine, that the Board of Regents of the University of Michigan, is an independent body, elected by the people and not by the legislature. and that the act referred to can be regarded in no other light than as a recommendation on the part of the legislature to the Board of Regents, which they may, or may not adopt, as they shall think best. It is obvious, however, that the same influences which were brought to bear on the legislature, may ultimately reach the Board of Regents, through the ballot box, and force them to the adoption of the obnoxious measure. The people who elected so stupid a set of legislators, may, in turn, elect an equally ignorant set of Regents. Our remarks are directed against the whole system of placing professional education in the hands of the people, who are notoriously incapable of directing it aright, and who are ever ready to be influenced by unprincipled quacks and designing demagogues.

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MEDICAL MISCELLANY—SCISSORS AND PEN.

Death from Inhalation of Chloric Ether.—The Boston Journal records the death of Mrs. Fartey, of Lynn, Mass., from the inhalation of chloric ether administered for the purpose of having a tooth extracted. Cases of this kind are becoming fearfully frequent. We scarcely even pick up a medical journal without seeing recorded a fresh victim of anæsthesia, and yet it is daily resorted to for the slightest operations. It matters not that it is given "at the earnest request of the patient"—a request which may be followed with such dire consequences should not be yielded to, except in extreme cases.

Philadelphia Medical and Surgical Journal.—This spirited and excellent journal has doubled its former size, and is otherwise improved in appearance. It is issued semi monthly at one dollar and fifty cents a year in advance. Success to Dr. Bryan.

The Medical Profession in New York City.—Judging from the tone and spirit of a portion of the medical press of New York, we have come to the conclusion that there is more jealousy, contention and bickering among physicians in Gotham, than is to be found in any other city, town or village in the whole country. Wherever such an unfortunate state of things exists, two results must necessarily follow: first, the profession as such, will stand proportionally low, as the community will naturally regard as true of the whole mass, what they individually say of each other; and secondly, quackery will abound in all its native ignorance and hideous deformity. Is not this the result in New York?

How to take Quinine without tasting it.—Dr. W. H. Edwards says, that quinine may be taken without tasting its bitterness, by putting the salt in powder in the middle of a tablespoonful of thick mucilage of slippery elm, so as not to touch the spoon, and immediately swallow it. The mucilage is obtained by macerating several long slips of the bark in a tumbler of water, and after the bark has swollen and become surrounded by mucilage, strip this off into the spoon by drawing the bark between the thumb and fore finger. If the quinine is dextrously enveloped in the mucilage, the patient is unconscious of having taken a bitter dose.

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Extraordinary Sized Child.—On Thursday last, the wife of Mr. Joseph Sooler, who resides in Illinoistown, opposite the city of St. Louis, gave birth to a fine boy weighing twenty-two and a half pounds. The mother of the child is the daughter of Mr. Francis St. Cir, an old citizen of this county, it being her first child. This is hard to beat.

Delirium Tremens.—Tartar Emetic.—Dr. Peddie, (Monthly Journal,) discountenances the treatment by opium, and recommends, from an experience of eighty cases, the use of tartar emetic, in doses of from one-quarter to one-half of a grain every two hours. If the bowels are not opened by this remedy, compound jalap powder is given. The patient is not to be restrained by mechanical means, and light is freely admitted into the room, as by its means optical delusions are prevented.

Work on Mal-Practice.—We are glad to see that Dr. Stephen Smith, Surgeon to Bellevue Hospital, New York, is engaged in preparing a work on "Medical Jurisprudence," with special reference to the illustration of the legal responsibilities of the medical practitioner, in his several capacities as physician, surgeon and accoucheur. The frequency of late with which suits for alleged mal-practice have been instituted in various parts of the country, renders this an exceedingly interesting as well as important subject; and a work setting forth the legal relation of physician and patient, cannot fail to be acceptable to the profession at large. In order that the work may cover the whole ground and be well illustrated by cases, the author would be obliged to practitioners through ut the country if they will furnish him with a report of all the litigated cases coming within their knowledge.

Female Hospital.—An effort is making in New York for the establishment of a Hospital for the special treatment of the diseases of women, to contain 500 beds. In the mean time, temporary rooms are soon to be opened for the reception of patients, and the services of Dr. J. Marion Sims, as attending surgeon, have been secured. This is a species of "women's rights," in which all sensible men will heartily concur.

Infanticide in London.—The number of dead bodies of new born infants which are picked up in the streets, squares and parks, of London, is frightful to contemplate, amounting to between *eleven and twelve thousand* annually, and the number is said to be steadily on the increase. A fine opening is here presented for Foundling Hospitals.

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Effects of Fright on the Unborn Fœtus.—Baron Percy, an eminent French military surgeon states, that after the siege of Landau, in 1793, in which, in addition to a violent cannonading, which kept the women for some time in a constant state of alarm, the arsenal blew up with a terrific explosion. Out of 92 children born in the district within a few months thereafter, 16 died at the instant of birth, 33 languished for from eight to ten months and then died, 8 became idiotic and died before the age of five years, and 2 came into the world with numerous fractures of the bones of the extremities.

Bubo.—It is seldom necessary to open a bubo. Employ counter-irritation. Take a solution of nitrate of silver (one drachm to two drachms of water), with the addition of three drops of strong nitric acid This is to be painted freely into the skin over the inflamed gland. It causes great pain and soreness, which is followed by rapid diminution of the gland. This treatment may be extended to other cases in which inflammatory deposits, whether purulent or fibrinous, require to be absorbed or diminished.

Taxing Physicians.—We learn from the Stethescope that the physicians of Richmond are subject to a double tax for the privilege of practising their profession in the capital of Virginia. First, they are taxed on their earnings for the benefit of the State Treasury, and recently a like amount has been imposed by the municipal authorities for the benefit of the treasury. This is taxation with a veng.ance. And yet while such double outrages are heaped upon the profession, the Stethescope still hopes that something will be done by the legislature for the protection of the medical profession.

Deaths among Medical Students.—Three of the students in attendance on the Medical Department of the University of Michigan, died at Ann Harbor, during the past winter, of small pox.

Decoction of Mullein Leaves as an Anti-Periodic.—Dr. McCrary, of South Carolina, states in the Southern Med. and Surg. Journal, that he has found the decoction of mullein leaves equal to the sulphate of quinine as an anti periodic. He takes ℥ ii of the leaves to a quart of a boiling water, and boils until it is reduced to one quart. Of this, four desart spoonfuls is given every two hours, commencing early in the morning, and repeated whenever the paroxysm is expected.

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Treatment of Irritable Stomach in Phthisis.—Several very pleasing cases, illustrative of the good effects of hydrocyanic acid and bismuth in the treatment of irritable stomach in phthisis, have recently been under observation among the out-patients at the City of London Hospital for Diseases of the Chest. The patients had been long subject to nausea and attacks of vomiting, and were quite unable to retain cod-liver oil on the stomach, very often rejecting also ordinary food. The mixture prescribed consisted of three minims of the hydrocyanic acid and ten grains of the trisnitrate bismuth made into a draught with mucilage and green-mint water, and taken thrice daily. By its aid several patients have got quite rid of their troublesome stomach symptoms, and are now taking the oil easily and with benefit. The class of cases best suited for this treatment are those in which the tongue is generally clean, and in which the disease is undue irritability rather than disordered function.—*Med. Times and Gaz.*

An Electrotype.—The Philadelphia Ledger gives the following on the authority of the Patterson (N. J.) Intelligencer. A little girl was standing at a window before which was a young maple tree. After a brilliant flash of lightning, a complete image of the tree was found imprinted on her body. This is not the first instance of the kind on record, but it is certainly a singular phenomenon.

"*Bill Poole.*"—This notorious rowdy and pugilist, about whom the New York papers and the New York public have made such fools of themselves; came to his death from a ball lodged in the muscular part of the heart, opposite the septum, between the ventriocles. What is remarkable about the case is, that he lived thirteen days in this condition without symptoms of carditis until a few days prior to his death.

Sudden Death.—Dr. S. D. McNeil, of New Orleans, died suddenly in that city, on the 10th ultimo, of apoplexy. He was seized while seated at the opera by the side of a lady friend, and lingered only eight hours.

Precocity.—Dr. Stonkley, of Virginia, relates in the Medical Examiner, the case of a negro girl, thirteen years of age, who was delivered of a healthy child of the ordinary size.

Professor Gibson.—This well known professor, who has occupied the chair of surgery, in the University of Pennsylvania, since 1819, is about to retire. Who his successor will be remains to be seen.

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Sulphate of Bebeerine in Diarrhœa.—Dr. Mathews, of Manchester, strongly recommends the use of the sulphate of bebeerine, as a remedy in severe cases of diarrhœa. He regards it as almost a specific, its effect in some instances being magical. In the short space of half an hour he has seen a patient restored from intolerable anguish to perfect ease by its use. After a few doses of calomel and opium, he recommends the following: sulphate of bebeerine twelve grains, sulphuric acid and rectified ether, each twelve minims, cinnamon water six ounces; of which one ounce is to be taken every four hours.

Libel Suit.—Professor Draper, of the New York University, has brought suit against Dr. Reese, editor of the American Medical Gazette, for having stated upon the authority of a correspondent, that Dr. D. "is not a medical man, has had no medical education, and is only called M. D., *ex grata*, by the honorary degree conferred on him by this identical school over which he now presides."

The Unity of the Race, an established fact in Science.—Professor Owen, of London, than whom there is no higher living authority, expresses his mature convictions on this subject as follows: "Thus in reference both to the unity of the human species, and to the fact of man being the last, as he is the highest of all animal forms upon our planet, the interpretation of God's works coincide with what has been revealed to us, as to our origin and zoological relations in the world." And again, he says: "*Man is the sole species of his genus, the sole representative of his order.*" This will far more than outweigh the empty declarations of a thousand such upstarts in science as Messrs. Knott and Gliddon.

National Medical Association.—We have just learned by telegraph that Dr. George B. Wood, of Philadelphia, has been elected President of this learned Association. An honor well bestowed.

The letter on the Microscope, which will be found in this number, was addressed to my colleague, Dr. McPheeters, merely for his own amusement. On returning home I find that he has been mischievous enough to publish it. I have arrived only in time to make this explanation. *Ayez pitie de moi.* L.

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THE ST. LOUIS

MEDICAL AND SURGICAL JOURNAL.

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PART I.—ORIGINAL COMMUNICATIONS.

Meteorological Condition and Mortality of St. Louis in 1854.

By George Engelmann, M. D.

This report is a continuation of the articles on the Meteorology of St. Louis in the years 1851, 1852 and 1853, in former numbers of this Journal. It will be found that the interesting and important data relating to evaporation and humidity, which were wanting in the former tables, have been added.

I repeat, for the full understanding of the Meteorological table, page 295, that the observations were made at the north side of my house, in a wide, open street, over one hundred feet above low water mark of the Mississippi, and nearly five hundred feet (481.5 feet according to my recent calculations) above the Gulf of Mexico.

The atmospherical pressure in 1854 was found to have been intermediate between that of the years 1852 and 1853; it ranged higher than in either year and nearly as low as in 1852. The monthly average fell from its maximum in January to May, when it reached its minimum, rose gradually to October, and remained fluctuating to the end of the year. During both former years the maximum also occurred in January and the minimum in April. The barometer was most fluctuating in January, November and April, and least so in August, which, with July, is generally that month where atmospherical disturbances are least considerable here.

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The daily barometrical variations were again remarkably regular and agree almost exactly with those of the three former years. The barometer rose, on an average, in the year 1854, from sunrise to 7 A. M. 0.011 inches, from 7 to 9 A. M. 0.014, from 9 A. M. to noon it fell 0.027, from noon to 2 P. M. 0.030, from 2 to 3 P. M. 0.007, from 3 to 9 P. M. it rose 0.020, from 9 to 10 P. M. 0.002, and from 10 P. M. till sunrise 0.017 inches; or taking only the principal variations into consideration, it rose from sunrise to 9 A. M. 0.025 inches, fell from 9 A. M. to 3 P. M. 0.064, rose from 3 till 10 P. M. 0.022, and from 10 P. M. till sunrise 0.017 inches. The average daily difference between the highest stand of the barometer at 9 A. M. and the lowest at 3 P. M. is found to be 0.064; in the two former years it was 0.065 inches.

The daily range of the barometer in winter and spring is often over half an inch or near one inch, and in January, it was in one instance over one inch. In the summer months the greatest change in 24 hours rarely exceeds one-fourth of an inch.

The temperature is the most interesting feature of the year 1854. It is generally acknowledged, that it exceeded that of the warmest summers known before, at least in the Mississippi valley, and it seems that the actual observations confirm this opinion.

The average temperature of the year, 57.4 deg. is 2.3 deg. higher than that of 1853, and 2.9 higher than that of 1852; but the main interest lies in the high summer temperature. January, a little warmer than in 1852, was a great deal colder than in 1853; February was warmer than in either year; March as warm as in 1852, much warmer than 1853; April on the contrary, equal to 1853 and warmer than in 1852; May was rather cool yet, much more so than in 1852; June was much warmer than in 1852, but not as warm as the excessive June of 1853; July, however, with 83 degrees exceeded any July observed by me in 22 years, as the June of 1853 did any other June in those years. August and September 1854, was also warmer than any of the corresponding months in any of the last 22 years; October was much warmer than in

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1853; November was cooler than in that year; but December warmer than in both previous years.

The average temperature of the three summer months June, July and August was in the last 22 years 76.3 degrees; the warmest summer was the last one, with 79.9 degrees; next follows 1850 with 79.7, 1838 with 79.2, 1834 with 79.1, 1841 with 78.5, and 1844 with 78.2 degrees. The coolest summer of any in the last 22 years was that of 1835 with only 72.0 degrees; next follows in ascending order 1848 and 1839 (73.7), 1842 (73.9), 1852 (74.2), 1849 (74.7), etc. The years 1843 and 1853, showed about the average summer temperature.

The lowest temperature of the year, occurred Jan. 21st, three deg. below zero, which was lower than it had been since the famous cold Monday, Jan. 19th, 1852, and lower than it was at any time during the last winter of 1854–5.

In April, the thermometer ranged both lower and higher than it had done in the two years before, but did not reach as high as this year, 1855, (93 deg.); the variation in that month was greater than in any other month in the year, with the exception of January. It is remarkable, that from May to December, the range of temperature in every month lay between 40 and 48 degrees.

On June 18th, the temperature for the first time in the year reached up to 90 degrees, it rose to 97 on June 27th; with the first of July it attained to 98, and July 19th to 100 degrees; on each of the four days, from July 29th to August 1st, and again August 30th, it reached 100 or 101 degrees, and nearly 100 on September 8th. From June 12th to September 12th, in full three months—there were not more than two days [July 9th and August 9th] when the thermometer did not reach 80 degrees; on 27 days it reached to between 80 and 90; on 59 days between 90 and 100; and on 7 days it rose to 100 degrees or above.

During the same 93 days the temperature was only twice under 60 degrees; (58 deg. July 11th and August 8th); on 25 days between 60 and 70; on 59 days between 70 and 80 degrees, and on 7 days it was even at sunrise 80 degrees or more.

The temperature fell to the freezing point or below it for the last time in spring, April 17th, and for the first time in fall, November 5th, a period of 202 days intervening.

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The greatest changes of temperature in 24 hours, occurred as usual in the winter months. From January 5th at 9 A. M., till January 6th at sunrise the thermometer fell from 57.5 to 6.0 degrees. The greatest changes, as I have before said, occur in the winter months, and have reached sometimes 54 or 56 degrees. These are always falls—the rises are never so great in so short a time; the greatest observed last year, took place on February 9th, when the temperature rose from 1 A. M. to 8 P. M. 39.5 degrees. The letters f, and r, in this column, indicate a fall or a rise.

The following columns furnish interesting data about the evaporation as indicated by the difference of the dry and wet bulb thermometers. It will be seen, that in July, the greatest difference reached 24.5, in September 26.5, and in August 27.5 degrees, indicating a powerful evaporation, and consequently great dryness of the atmosphere.

Relative humidity means the per centage of humidity or dissolved aqueous vapor in the atmosphere. The quantity of vapor completely snturating the atmosphere, is indicated by 100, and 0 would be an absolutely dry atmosphere, without any aqueous vapor. It is evident, that in a higher temperature the air dissolves and retains in solution a greater quantity of water or vapor than in cold weather; relative humidity, therefore, does not refer to any absolute quantum of vapor, but as the term indicates to the proportion. It is observed, that November and August had the least, and October the highest relative humidity; March, April, May and July follow next to August; and January, June and December were the most humid months, next to October. It will be noticed, that the quantity of rain which falls in a month is by no means in direct proportion to the relative humidity of the same period of time.

I am unable to compare these observations with others made in different parts of the country, nor have I instituted here such observations before, so that for the present they must stand isolated, and cannot yet yield the valuable information which in future we have a right to expect from them.

The year 1854 was one of remarkable draught, and we still suffer under the consequences of this want of rain. So no doubt every one who takes up these tables will be astonished

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in seeing 40 inches of rain recorded for this year; while in the year before, 1853, it was actually 10 inches less! In 1852 it amounted to nearly 47 inches. But by looking more closely to the table, we find that most rain fell in the spring months, March to May, viz., over 21 inches, while in the three following months, which are of much greater importance to vegetation, not quite 6 inches fell. This is the smallest quantity of rain observed by me during those months in the last 18 years. Next in order comes the summer of 1837, 1843, 1850, 1842, 1841, with 7, 8, 9 and 10 inches of rain. The largest quantity in these months was noticed in 1848, 32 inches; 1849 and 1845, 21 inches; 1851, 17 inches; 1839 and 1840 nearly 16 inches, etc. On one day (May 13) it rained over 3 inches; on 2 days (April 26th and June 20th) over 2 inches; and on 10 days over 1 inch. From May 30th to June 20th not one inch of rain fell, and after the heavy rain of the latter date, we had no rain at all till July 5th and 6th; and in the 6 weeks from that time to August 15th, the three light rains [and local ones at that] brought only 0.40 inches; on August 15th, we had one good rain of 1.18 inches, and then again till Sept. 11th, nearly four weeks, only 0.75 inches in two rains.

The quantity of melted snow amounted to 1.53 inches only, over one inch of which fell January 11th and 16th. The last snow of winter was seen March 28th, and the first in the fall, November 26th.

In regard to the influence of moisture on health, I will only remark, that in the extremely wet summer of 1849, and the rather wet summer of 1851, as well as in the dry summers of 1850 and 1854, cholera prevailed at St. Louis; so it did in the cool summers of 1849, 1852 and 1851, and in the very hot summers of 1854 and 1850. The conclusion therefore lies very near that neither heat nor moisture then have any material influence on the development of this disease. The important influence however of these agents on our autumnal remittent and intermittent fevers is very striking, as I have shown in a former number of this Journal, [May, 1853], and it is again proved by last year's experience. The *dry*, though *hot* summer and fall were remarkably exempt from these truly *climatic* diseases.

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I have introduced as a datum of some interest the number of hours in which rain and snow fell. It will be seen, that in 89 hours in January only 1.18 inches descended, while in only 35 hours in May 6.30 inches fell; in May, therefore, more than six times the quantity of rain fell in a given time than in January. Observations, continued for a number of years prove the curious fact, that the quantity of rain which descends in one hour gradually increases from nearly 0.04 inches in January to 0.24 inches in July, and decreases again quite regularly to 0.05 inches in December.

South-eastern winds prevailed last year over the western ones, which latter usually have the preponderance with us. South-east winds are noticed on 78 days; west winds on 76 days; south winds 52 days; south-west and north-west winds each 40 days; east winds 35 days; north winds 23 days; and north-east winds, always the rarest in our climate, 21 days.

The mean clearness of the sky was last year hardly greater than in 1853; but July shows a greater clearness than any month observed before, viz. 8.4. The next column shows that it counted 26 clear or fair days! A number which had never been reached before in 22 years, and was only approached in July and August 1833, in September 1838 and 1851, and in October 1842. The clearest weather, as well as the largest number of fair days is noticed in the months from June to October, amounting to the remarkable sum of 91 among 153 days, only three of which were entirely overclouded. Dark days, where the sky was all day overclouded or overcast were noticed 39, nearly the same as in the previous year—most of them occurred in March, January and December.

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1854.	PRESSURE. OF ATMOSPHERE. (BAROMETER.)				TEMPERATURE. (THERMOMETER.)					HUMIDITY.						ELECTRICITY.	PREVAILING WINDS.	STATE OF THE SKY. NUMBER OF DAYS.				
	Average.	Highest.	Lowest.	Range.	Average.	Highest.	Lowest.	Range.	Greatest Change in 24 hours. Degrees.	Greatest Change in 24 hours. Date.	Evaporation Difference of wet and dry Bulb Thermometer. Average.	Evaporation Difference of wet and dry Bulb Thermometer. Highest.	Evaporation Difference of wet and dry Bulb Thermometer. Lowest.	RAIN AND SNOW. Quantity.	RAIN AND SNOW. Hours.	No. of Thunder Storms.		Mean Clearness of Sky.	Fair.	Variable.	No Sunshine.	Rain or Snow.
January...	29.577	30.301	28.966	1.335	27.7	63.0	—3.0	66.0	f. 51.5	5–6	2.8	13.5	0.2	1.18	39	..	w. then nw & s.	5.0	10	15	6	4
February..	29.500	29.997	29.021	0.976	38.7	70.0	16.0	54.0	f. 40.5	1–2	4.2	15.0	0.5	3.11	67	2	w, then nw. & s.	4.6	7	16	5	7
March	29.457	29.958	29.011	0.947	46.8	81.5	25.5	56.0	f. 38.5	17–18	5.2	18.5	0.0	0.60	7.49	100	5	4.5	10	12	9	11
April	29.443	30.005	28.897	1.108	55.7	88.5	26.0	62.5	r. 33.0	19	6.2	21.5	0.5	0.61	7.60	70	5	5.8	12	14	4	8
May	29.332	29.632	28.732	0.900	64.4	85.0	45.0	40.0	f. 29.0	1–2	7.2	19.5	0.0	0.62	6.30	35	8	ss. then w.	5.6	11	19	1	13
June	29.415	29.649	29.121	0.528	75.3	97.0	49.0	48.0	f. 28.0	6–7	7.2	19.0	0.0	0.67	3.21	11	4	ss & w. then s w	6.8	17	12	1	5
July	29.489	29.676	29.230	0.446	83.0	101.2	58.0	43.2	f. 31.5	8–9	9.5	24.5	1.0	0.62	0.92	4	3	s w, then s.	8.4	26	5	..	4
August ...	29.489	29.613	29.319	0.294	80.8	101.0	58.0	43.0	r. 28.0	19	9.8	27.5	1.0	0.59	1.80	7	3	E. and ne.	7.2	16	15	..	3
September.	29.503	29.920	29.157	0.763	75.0	99.5	52.0	47.5	r. 28.0	17	8.0	26.5	1.0	0.64	1.44	8	5	ne. then s. & w.	6.8	17	13	..	7
October...	29.529	29.853	28.910	0.943	60.1	82.5	37.0	45.5	r. 27.5	9	5.2	18.0	0.0	0.70	4.15	13	5	ne. then w & s.	6.3	15	14	2	8
November	29.444	30.072	28.809	1.263	42.6	70.0	23 0	47.0	r. 28.5	14	5.0	15.5	0.0	0.58	1.94	32	..	w.	5.6	13	12	5	4
December.	29.529	29.807	29.122	0.685	36.2	61.0	14 0	47.0	r. 26.0	30	3.4	15.0	0.0	0.67	1.49	40	..	w. then nw.	5.6	15	10	6	6
Whole year.	29.475	30.301	28.732	1.569	57.4	101.2	—3.0	104.2	f. 51.5	Jan'ry	6.1	27.5	0.0	0.63	40.63	426	40	nw. and w.	6.0	169	157	39	80

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MORTALITY OF ST. LOUIS, IN 1854.

1854.	WHITES.				Colored.....	Total.....	Per Mille.....
	Males.....	Females.....	Total No. Whites.....	Children of 5 years and under.			
Jan.....	127	93	220	132	5	225	1.8
Feb....	136	86	222	96	4	226	1.8
March.	147	98	245	107	9	254	2.0
April...	230	138	368	156	12	380	3.0
May....	290	165	455	170	3	458	3.6
June...	550	420	970	434	18	988	7.8
July....	784	693	1477	707	23	1500	11.8
Aug....	502	392	894	452	12	906	7.1
Sept....	362	246	608	306	11	619	4.9
Oct	325	199	542	251	13	537	4.2
Nov.....	222	128	350	153	12	362	2.8
Dec.....	190	136	326	142	9	335	2.6
Total,...	3865	2794	6659	3106	131	6790	53.5

This table is based on the report of weekly interments, made by the sextons of the cemeteries of the city. For the details I am indebted to the indefatigable exertions of Dr. Reyburn, who has devoted a great deal of time and labor to the investigation and elucidation of our statistics of health and mortality. Unfortunately, the reports of the sextons in earlier years, [the present system of registry only commenced in 1841] were made so loosely, and the register's books were kept so unsystematically, that it is impossible to get at the full truth.

Even at this time, the very proper and full ordinances, regulating the physicians' certificates and the registry of the same, are almost a dead letter. It is hoped, that the present city administration will, in their laudable zeal for wise reforms, not overlook this important point. We should very earnestly desire that the blank certificates, furnished by the city register, should in every case of death, be filled up in all their parts, stating not only the name, age, and sex of the person, and the cause of death, but also the native country, the length of residence in the city and the precise locality where the death occurred. It is further greatly desired that

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the certificates should be filled by the physician, as the law requires, and not by friends, undertakers or other persons, as is understood very often to be the case. This would be much facilitated by small portable blanks, which physicians always could carry with them, in place of the present unnecessarily large and unwieldy ones. In addition to the other requirements, it would furnish valuable information if the occupation was also stated in the certificate.

The table shows a mortality greater than any we have had here with the exception of the great cholera year, 1849.

In the first three months of the year, the mortality was moderate, and rather below the average, but already in April and May, before the great heat commenced, it became greater than we ever had it in those months, excepting the year 1849, and also May 1850. In June, which was much cooler than the corresponding month of 1853, the mortality was nearly three times as large as in that year, and only the years 1849 and 1851 exceeded it. In July, only 1849 and 1850 take the precedence. In August of the last 14 years, only 1850 showed a greater mortality, and in September and October, only the year 1847; November and December had an average mortality.

The year 1854 was the fifth of our cholera years, (always excepting the cholera period 1832 to 1835,) and a comparison of this with the five preceding years, permits us to form most favorable conclusions for the future.

I repeat an assertion, made by me before, that with us the cholera has in the last years as well as in the epidemics which raged here 22 years ago, shown a character of regularity, which has not been observed so distinctly in other localities. It has always commenced or at least increased (became epidemic) sometime in April, reached its acme about the first week of July, and has then rapidly declined, as our bilious remittent and intermittent fevers became prevalent. In most of the cholera years July showed the greatest number of deaths; only in the year 1851, June exceeded July. A carefully revised table of comparative mortality prepared by Dr. Reyburn and myself, gives the number of deaths per mille of population in the most fatal month of the last six years, as follows:

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July	1849,	32	deaths per mille.
"	1850,	13	" "
June	1851,	10	" "
July	1852,	7	" "
"	1853,	3	" "
"	1854,	12	" "

The present great epidemic commenced in 1849 with fearful violence, became less and less in the three succeeding years, and had ceased entirely in 1853. In 1854, we had a recurrence of the epidemic, but it did not commence the new paroxysm, so to say, with the violence which it showed even in the second year [1850] of the first period. If there is any safe conclusion to be based on analogy and on the history of this and other epidemics, the second period which commenced last year will be as much less violent and as much shorter, as it commenced milder; and we may see the year 1856, or at least 1857, as free from cholera as was the year 1853.* Whether after that a third period or paroxysm of the disease, milder and shorter than the two former, will follow; or whether we shall then for a number of years enjoy an immunity from this dreadful foe, remains to be seen. At all events, it seems to me to be a safe presumption, (I may almost say conclusion,) that after a few years cholera will cease to be spoken of as a dreaded and ever returning epidemic, or as an endemic disease, becoming naturalized among us; an opinion to which the popular mind at present despondingly seems to lean.

ADDENDA.—The following interesting tables were kindly furnished by Dr. REYBURN of this city. They are taken from his able and elaborate report, made to the American Medical Association at its late meeting, on the epidemics of Missouri. They come in as an appropriate supplement to the foregoing article, and are therefore published in this connection. With one or two exceptions the remarks accompanying the tables are our own.—EDITOR.

* Since this was written, cholera which commenced this season (1855) with considerable violence about the last week in April, has after a very short duration almost entirely subsided.

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MORTALITY BY CHOLERA, *in St. Louis, during each month in* 1854.

JANUARY	FEB'RY..	MARCH..	APRIL...	MAY.....	JUNE....	JULY....	AUGUST.	SEPT'BER	OCTOBER.	NOV'BER.	DEC'BER.	TOTAL...
1	2	10	90	190	479	533	136	55	20	4	13	1534

This statement exhibits a far greater mortality from cholera than many of our citizens, who are not familiar with the facts, would have supposed. In the months of June and July the epidemic influence was peculiarly rife—two-thirds of the entire number of deaths having occurred during these two months. The effects of the cholera influence on the general mortality of the city is very perceptible.

MORTALITY BY DIARRHŒA, *in St. Louis, during each month in* 1854, *with the respective ages of the subjects.*

AGE.	JANUARY	FEB'RY..	MARCH..	APRIL...	MAY.....	JUNE....	JULY....	AUGUST.	SEPT'BER	OCTOBER.	NOV'BER.	DEC'BER.	TOTAL...
Under 2 years	2	2	3	3	4	11	28	18	8	9	4	2	95
2 to 5 "	2	0	1	4	1	3	7	12	4	4	5	1	44
5 " 10 "	0	0	2	4	3	2	5	1	1	3	2	0	23
10 " 15 "	0	1	1	1	0	1	1	2	1	2	0	1	11
15 " 20 "	0	0	0	0	0	1	1	0	0	1	2	0	5
20 " 30 "	6	1	7	2	0	2	3	4	9	11	11	10	63
30 " 40 "	2	4	6	2	4	1	1	7	9	14	10	14	75
40 " 50 "	1	0	1	4	1	1	4	6	6	6	8	7	45
50 " 60 "	1	0	1	2	1	1	4	3	3	5	3	4	28
60 and over..	1	2	0	1	1	1	2	2	1	2	1	3	16
Unknown,	0	0	0	0	1	0	1	0	1	0	0	0	3
	14	11	22	23	16	24	57	55	42	57	44	40	407

From the above it will be seen that the months of July, August and September were the most fatal from diarrhœa. The most unfortunate age, as usual, was that of two years and under, while the next most fatal were between thirty and forty and twenty and thirty.

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MONTHLY MORTALITY BY DYSENTERY *in St. Louis for* 1854.

JANUARY.	FEB'RY..	MARCH ..	APRIL ...	MAY.....	JUNE	JULY	AUGUST .	SEPT'BER.	OCTOBER.	NOV'BER.	DEC'BER..	TOTAL...
5	5	5	13	9	36	72	59	53	68	37	28	390

MORTALITY BY INTERMITTENT FEVER, *in St. Louis*, 1854.

AGE.	JANUARY	FEB'RY..	MARCH ..	APRIL ...	MAY.....	JUNE	JULY	AUGUST .	SEPT'BER.	OCTOBER.	NOV'BER.	DEC'BER.	TOTAL...
5 yrs & under	0	0	0	1	0	2	3	1	0	2	1	0	10
5 to 10 years	0	1	0	0	0	0	0	1	0	0	1	0	2
10 " 20 "	0	0	0	0	0	0	1	0	2	0	0	0	4
20 " 30 "	0	0	1	1	0	1	2	5	2	3	0	0	15
30 " 40 "	1	0	0	0	0	2	0	4	1	1	2	0	11
40 " 50 "	0	1	1	1	0	0	1	0	3	0	0	0	8
50 " 60 "	1	1	0	0	0	0	0	0	2	0	0	0	4
60 y'rs & over	0	0	0	0	0	0	0	1	0	0	1	0	2
	2	3	2	3	0	5	7	13	10	6	5	0	56

In the above table is included all reported under the term " Congestive Fever. The mortality by Climate Fever in this year, falls much below that of other years; and in connection with the table below, shows a remarkable decline in what are termed Miasmatic Fevers. This result, when we take into consideration the extreme heat and dryness of the summer and fall, seems strongly to favor the malarious theory as ordinarily entertained.

MORTALITY BY BILIOUS FEVER, *in St. Louis*, 1854.

AGE.	JANUARY	FEB'RY..	MARCH ..	APRIL ...	MAY.....	JUNE	JULY	AUGUST .	SEPT'BER	OCTOBER.	NOV'BER.	DEC'BER.	TOTAL...
5 yrs & under	0	0	0	1	1	2	6	3	0	0	0	0	13
5 to 10 years	0	0	0	0	1	0	1	2	1	2	0	0	7
10 " 20 "	0	0	0	0	0	4	2	2	1	0	0	1	10
20 " 30 "	0	0	0	1	2	4	8	9	9	0	3	1	37
30 " 40 "	3	0	0	0	0	4	7	9	8	2	0	1	34
40 " 50 "	1	0	0	0	0	1	3	1	4	1	1	2	14
50 " 60 "	0	0	0	0	0	1	3	0	0	1	0	0	5
60 y'rs & over	0	0	0	0	0	0	1	0	0	0	0	0	1
	4	0	0	2	4	16	31	26	23	6	4	5	121

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MORTALITY BY TYPHUS AND TYPHOID FEVERS, *in St. Louis*, 1854.

AGE.	JANUARY	FEB'RY..	MARCH..	APRIL...	MAY....	JUNE....	JULY....	AUGUST.	SEP'BER.	OCTOBER.	NOV'BER.	DEC'BER.	TOTAL...
5 yrs & under	2	1	2	1	2	2	2	1	3	1	1	1	19
5 to 10 years	1	2	2	1	4	1	0	2	0	1	2	3	19
10 " 20 "	2	2	3	2	3	1	5	7	3	5	3	0	36
20 " 30 "	3	1	2	9	9	6	20	13	11	9	6	5	94
30 " 40 "	1	6	1	4	6	3	8	14	10	7	4	4	68
40 " 50 "	1	1	1	2	0	3	0	4	4	1	1	3	21
50 " 60 "	2	2	2	1	1	1	1	2	2	2	1	0	17
60 y'rs & over	0	1	2	1	0	0	0	0	1	1	1	0	7
	12	16	15	21	25	17	36	43	34	27	19	16	281

August seems to have been the most fatal month, and from twenty to thirty by far the most fatal ages from Typhus and Typhoid Fevers. This result is somewhat different from that of former years, in which the winter months have been the most prolific from these diseases.

MORTALITY BY ERUPTIVE FEVERS, *in St. Louis*, 1854.

	JANUARY	FEB'RY..	MARCH..	APRIL....	MAY.....	JUNE....	JULY....	AUGUST..	SEPT'BER	OCT'BER.	NOV'BER.	DEC'BER.	TOTAL...
Scarlet Fe'r.	4	2	4	8	6	5	5	2	1	1	0	0	42
Measles.	0	0	1	2	2	25	13	4	1	0	1	1	49

The mortality of the above diseases was principally confined to the week in June and July, when Cholera was at its maximum.

Note by Dr. Reyburn:—An analysis, showing particularly the result in the table below, would be very interesting, but we have time only to notice one or two points. It will be observed that eight of the diseases mentioned in the series, increase in each successive week, until they attain their greatest weekly mortality, in the week ending July 2d, the maximum week of the Cholera mortality; subsequently, their weekly variations in fatality corresponds very much with the mortality of Chol-

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era. The entire mortality of subjects of five years and unde, is, in every succeeding week from April 1st to July 2d, more and more observed in the 13 tabulated mortuary causes, so that in this final week the aggregate 209, is made up of 200 subjects dying of these thirteen causes, leaving therefore, but nine to be accounted for, by the accidental or rarer causes of infant mortality. The augmentation of general mortality, as a result of the presence of the "Cholera cause," is strikingly manifest, in the instance of the Eruptive Fevers which were not generally prevalent, yet the mortality in the city, the usual sporadic cases only occuring, yet the mortality by these fevers was so much increased in the week ending July 2d, as to imply an epidemic prevalence of them.

WEEKLY MORTALITY OF SUBJECTS OF FIVE YEARS OF AGE AND UNDER, *in St. Louis, in the Spring and Summer of* 1854; *showing the chief causes of Infantile mortality, during the prevalence of Epidemic Cholera.*

Week ending Sunday	Weekly aggregate of deaths of 5 years & under.	By Cholera.....	Cholera Inf'tum.	Diarrhœa.....	Dysentery.....	Marasmus.....	Teething.....	Convulsions....	Meningitis.....	Eruptive Fevers.	Pertussis.....	Acute Diseases of Air Tubes....	Consumption..	Still Born.....
April 9	34	2	1	3	0	1	0	6	3	2	0	2	1	6
" 16	36	4	2	0	1	2	2	2	4	1	0	1	3	1
" 23	38	0	1	2	2	1	2	7	0	3	1	4	0	4
" 30	32	0	5	2	2	2	0	9	2	3	0	0	1	5
May 7	38	7	1	1	1	2	0	3	4	3	1	3	1	3
" 14	42	11	1	3	0	3	2	3	1	3	0	1	2	4
" 21	43	12	5	2	1	1	0	5	2	3	0	2	2	4
" 28	30	8	1	0	0	1	0	4	1	0	2	0	0	3
June 4	41	6	1	0	2	2	3	6	1	4	2	4	1	2
" 11	69	21	5	1	6	4	1	2	3	3	0	1	4	4
" 18	75	13	9	5	4	5	2	9	5	3	0	1	2	0
" 25	118	32	12	4	3	5	5	12	4	11	1	4	3	4
July 2	219	50	38	10	6	8	18	20	18	17	2	6	3	4
" 9	212	35	29	8	8	4	16	28	16	9	1	1	3	2
" 16	140	28	34	7	2	9	9	13	16	5	3	2	0	4
" 23	139	22	25	7	13	3	8	18	12	6	2	2	1	2
" 30	138	14	26	5	17	12	12	15	6	4	0	2	1	4
August 6	126	3	28	8	6	11	12	16	7	3	0	1	1	3
" 13	107	3	19	2	10	9	7	8	9	1	1	0	3	3
" 20	98	2	18	8	9	7	4	12	3	1	0	1	4	1
" 27	88	5	19	6	3	3	5	12	3	1	0	1	0	1
Sept. 3	90	3	19	6	4	5	4	9	9	1	1	3	3	5
" 10	91	0	10	4	15	8	4	13	7	0	2	0	4	5
" 17	67	0	15	2	6	6	3	9	3	0	0	3	1	2
" 24	59	1	8	4	1	7	3	7	2	0	1	1	3	1
Oct'ber 1	58	0	6	4	4	7	2	6	5	1	0	0	1	1
	2218	282	338	104	126	128	124	254	140	87	20	46	48	78

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ARTICLE II.

Life. By J. H. WATTERS, M. D., *of St. Louis.*

[Continued from page 221, Vol. XIII.]

No. VII.—*The Conditions of Life.*—It is no inconsiderable step toward the discovery of the principle of a general process of action, to have well ascertained the general conditions of its existence. By "principle of action," I mean the *modus operandi* of these conditions in bringing about the special effect. If we imagine a man altogether unacquainted with the principle of a steam engine,—ignorant of the development of heat by oxydation and of the expansibility of water by heat, as well as of the principle according to which the action is modified by the machinery—if we imagine such a man with an engine before him, studying its principle of action, we can understand that he will have made considerable advancement when he discovers the general conditions to be heat, fuel, oxygen, water, and a special machinery. Still more, when he discovers that fuel is but a condition for the development of heat, that heat is but a condition to steam, and steam but a condition to the motion of the piston. With the human organism constantly under observation, the principle of action in our own bodies remains a problem yet unsolved. But many and important preliminary steps towards the solution of this problem have been taken in the rapid advancement of science in the last few years. We now know that the general conditions of life are oxygen, heat, a fluid plasma, and a special organism. The question *sub judice* is, what is the modus operandi of these conditions in giving origin to vital phenomena. And, I imagine, whether correctly or not, that enough facts are now known upon which a correct answer to this question might be based. I would not be surprised either if the most important of these facts—those bearing more particularly upon the question, are such as have been long known and generally understood, in the abstract. But we are so overawed when we approach vital phenomena, that we scarcely suppose these to have any thing to do with the question, and at once either fly off into wild speculation, or deny that finite intelligence

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can ever understand the principle of life. The fact that an apple will fall to the earth when unsupported, had been known perhaps since the time of Adam, but the *relation* between this and the motions of the planets was unthought of till the last century. Who, therefore, has the authority to predicate that there is not an analogous relation between the vital phenomena and those of the simplest chemical action?

What is the *modus operandi* of heat, oxygen and moisture, in giving origin to vital phenomena in a seed? This is the plain question. If the propositions advocated in the previous articles be true, we will have but little difficulty in answering this question. If the organization is all that is peculiar to the seed, these conditions cannot *excite* the "vital principle" into action. Neither can these conditions excite any power, as no physical force can be stimulated. And it has been shown, I think, that the heat cannot be metamorphosed into a "peculiar vital force," as maintained by Dr. Carpenter. Now, you say, if there be no peculiar power in the seed, excited into action by these conditions, and if the heat cannot be transformed into such a peculiar power, and if the seed be really nothing more than a special arrangement of physical agents, why do not the heat, oxygen and moisture occasion the oxydation of this compound, and reduce it to inorganic matter as in other organic compounds? The simple answer to this question is, they *do* occasion the oxydation of the germ and reduce it to inorganic matter, just as they affect any other organic compound. But you may smile and say this is absurd, for do we not see that they produce action directly opposite—life, nutrition and growth? Life, nutrition, and growth are not the primary actions produced by these conditions, but secondary and reciprocal with a primary action which results as a natural and necessary consequence of the influence of the external conditions of life upon organic matter. True, there is a vast difference between the actions of an organism and those of unorganized organic matter when under the influence of the external conditions of life, but this difference is not in the primary action but in those secondary and consequent actions, which are peculiar to organized matter. There is a vast difference between the actions of a steam engine and the eleva-

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tion of the lid of a common tea kettle, but this difference is not in the primary action of steam, but in the secondary and consequent actions, the peculiarity of which is due to speciality of machinery. Now we have maintained by a process of reasoning entirely independent of the present proposition, that there is nothing whatever in the living organism to which the vital phenomena can be ascribed except the special arrangement of the physical agents in that organism. It has also been maintained, that absolute or efficient power does not exist as a property, quality, or attribute of any physical agent whatever. If this be true, and it must be true, we must refer physical action to an equivalent antecedent as the direct cause, and the direction of action to mechanism, and not to assumed efficient forces, such as affinity, attraction, vital force, &c. Oxydation is the "natural tendency" in all organic matter when under the influence of the external conditions of life; the organism is a special arrangement of physical agents by which action, thus originating in the machinery, is so directed as to constitute vital phenomena. Action may *seem* to begin here and end there, but this is all an illusion; and under this illusion, we have assumed certain absolute, efficient physical forces as the direct cause, which we fancy give origin to these actions immediately by an internal effort or energy. But action, or a disequilibrium of the physical agents, exists as a fact, and, if these physical agents be inert, must continue in its endless chain of reactions through the vast machinery of the universe, till it shall reverberate back to the Absolute and Eternal, in whom is all power and might. The universal machinery of nature is in action; change and modification in direction is the law, but this change and this modification is due to the machinery. There is no reversal of the laws of matter in a living organism. But if the speciality of the vital actions be due to the physical arrangement in the organism, these actions must be reciprocal with somewhat anterior. If I can show reason to believe that the vital actions are reciprocal with oxydation through the organic machinery, I obviate the necessity of assuming a peculiar force, to reverse the natural laws of matter, and to counteract the "destructive tendency to decay." I start with oxydation as one link in

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the chain of sequences in the machinery of the universe, and not as an ultimate power; as the *first* action in the organism, but not as the direct result of an effort of absolute force; as the *antecedent* to those actions which are peculiar to the organic machinery, and not as the *destructive* tendency of matter resulting from *inherent* affinities.

It is admitted by all, that the external conditions of life tend to produce the oxydation or decay of the organism. The question then arises, how do these conditions occasion *vital phenomena?* The answer to this question has been that there is in the organism a peculiar "vital force" or occult "principle," which these conditions stimulate into action, and which thus stimulated produces the vital phenomena by a direct effort. It has been observed, that the only evidence of such a peculiar force, is these very phenomena themselves which it has been assumed to explain. And evidence sufficient to convince me, at least, that there is no such peculiar force in the living organism, has been presented in previous articles. It has also been maintained, that if there were such a peculiar force, the external conditions of life could not stimulate it into action, as force cannot be inactive. Having thus denied the hypothetical explanation of a peculiar force, we fall back to the question, how do the external condition of life occasion vital phenomena in the organism? Admitting the proposition that these conditions tend to produce oxydation or decay, the question arises, does this tendency grow out of the inherent properties or affinities of the matter? From a consideration of the simplest chemical phenomena and certain self-evident propositions, I come to the conclusion that there is no ground either from facts or reason to predicate to any physical agent whatever, absolute power or inherent capacity to originate action. More, that there is positive evidence from facts and reason, to establish that every chemical action is reciprocal with somewhat anterior through "dynamic agents," which are changed in relative quantities by such antecedent. By this universal law of reciprocal action, the way is prepared to give a satisfactory answer to the question, how heat, oxygen and moisture, though they tend to produce oxydation, occasion vital phenomena in an organism. We have seen that

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the peculiarity of the vital actions, the development of special forms, &c., must depend either upon an intelligent voluntary power directly, or upon mechanism; we have seen that these actions do not depend upon an intelligent power directly; hence, they depend upon mechanism. If they depend upon mechanism for their speciality, they must be reciprocal with some antecedent. It has been seen, also, that it is not at all necessary that this antecedent should correspond in direction with the vital actions, as the speciality of the vital actions depends upon mechanism. We are now prepared for the original question,—how do the external conditions of life occasion vital phenomena in an organism as they tend to produce oxydation, if there be no peculiar vital force? This oxydation, occasioned by these conditions, is the antecedent with which the vital actions are reciprocal, just as the de-oxydation of an electrolyte is reciprocal with the oxydation of zinc in a battery. This is the general conclusion at which we arrive from the foregoing process of induction. There is no reversal of the laws of matter in a living organism, but the law of reciprocal action and reaction observed in mechanics and chemistry, is the *Law of Life.* The difference between this action and that can be referred only to difference of mechanism, by which action, having its origin with matter in the Absolute, is differently modified in direction.

I am not ignorant of the fact that all this will, by many, be looked upon as visionary and speculative. If the propositions be false, this opinion will be just; if they be true, such a verdict will nevertheless be natural. History confirms the fact that scientific men generally, decry with a free good will every innovation upon received opinions and doctrines. And it would seem that the more hypothetical and visionary these received opinions are, the more any departure from them is denounced as speculative. "No physician over forty years of age would receive Harvey's doctrine of the circulation," but they received without hesitation the "vital force" as an explanation everywhere, though found nowhere. Every attempt to explain vital phenomena by physical laws, is at first denounced as speculative. Wherefore I neither court favor nor fear censure. "What is writ, is writ." If *I* were not

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convinced of its truth, it would not have been written, but men have before now thought they had discovered the "philosophers stone," yet they have not succeeded so far as I know. If the views here advocated be true, they will ultimately obtain in spite of you; if false, they will probably remain unthought of in spite of me. They are true or false only as they represent or misrepresent the realities of nature, and not as they represent or misrepresent our opinions.

We pass now from the induction to the deduction process of reasoning. Assuming the general proposition, that the vital actions are reciprocal with oxydation to be true, let us now see if satisfactory explanations of the various vital phenomena can be deduced from this general proposition. If this can be done, the result of the induction process will thus be confirmed and established by the deductive. It is not pretended that the theory here advocated is free from difficulties entirely; the way is new and the most we can hope is to preserve the true direction.

First, let us consider here the fact that there *is* oxydation or waste wherever there is life, and that this oxydation or waste is in proportion to the vital activity. It is not necessary here to attempt to establish this proposition by arguments, as it is admitted by every school of physiologists. But each school of vitalists accounts for this proportional disintegration according to the tenets of its own peculiar faith. Those who assume a peculiar "vital force," contend that this force resists the chemical forces so long as it exists, but as each vital action involves an expenditure of vital force, portions of the organism are continually being given up to the power of the chemical forces in proportion to the vital action. Some of this school believe that the disintegration is in part or altogether due to the wear and tear, as the machines of art wear out by use. Now the objections to the existence of such a "peculiar force," are objections to this mode of accounting for the disintegration, but I will not further insist upon these now. The external conditions of life are conditions of decay; is it therefore only when this "peculiar force" is resisted by the "chemical forces" that it acts and produces vital phenomena? Force cannot be inactive or stimulated, whether this *peculiar force* or

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chemical force. It is evident, that heat, oxygen and moisture, tend to produce chemical action,—oxydation. But it is only under these conditions that we have vital action. This being the case, it appears absurd to contend that oxydation is secondary, resulting from the *expenditure* of a peculiar force in vital action. Liebig contends, that the non-nitrogenized compounds of the food, *protect* the organism from the chemical influence by uniting with the oxygen inspired. We know if baryta, soda, and sulphuric acid, be associated together, the baryta will protect the soda from the influence of the sulphuric acid, but the soda will not protect the baryta. Now, pure fat, sugar, or starch, may be exposed to oxygen without undergoing any chemical change, but the nitrogenized compounds of the organism cannot; hence, it would require proof more than the surmise of Prof. Liebig, to render it even probable that fat, sugar, or starch, protect the organism from the chemical influences, by uniting with the oxygen inspired, and thus give the "momentum of force" to the "vital principle." Moreover, as oxygen is one of the essential conditions of life, it requires some proof, I imagine, to show that the organism should be protected from its influence. It appears to me conclusive that there is no reversal of the laws of matter in a living organism; that the external conditions of life occasion oxydation, and that the vital actions are reciprocal with this oxydation plus the external disequilibrium of the dynamic agents which we refer to the sun. The fact that there is oxydation wherever there is life, accords with this view of the subject, and we have attempted to show reasons to believe that this view of the subject accords with a universal law of nature—the law of reciprocal action and reaction.

Dr. Carpenter, adopting the hypothesis of the "correlation of forces," says upon this subject, "we may state it as a general fact, that, so far from the living organism having the power of resisting the operation of chemical and physical agencies, it is completely amenable to them; * * * We shall hereafter see reason to believe, that just as the unorganized *pabulum* provided for the nutrition of the structure, is converted by the act of organization into the living cell, so the physical and chemical forces, whose influence promotes that organiza-

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tion are really *metamorphosed* (so to speak) into vital power by the instrumentality of the cell-germ, so that all the forms of 'cell-force' are thus immediately derived from them. It is however inherent in the very nature of the living organism, that this instrumentality should only persist for a limited time. The changes involved in the process of organization have the effect of rendering the organic structure less and less instrumental in determining this metamorphosis of force; and thus a time arrives, when the capacity of development is exhausted, and when the physical and chemical forces, no longer turned to the account of vital activity, begin to exert a disintegrating power. Hence, in the life of each cell, there is a period in which its peculiar attributes are undergoing augmentation, an epoch of perfection, a period of decline, and an epoch of entire cessation; the latter is forthwith succeeded by the decay of the structure." * The objections which have been brought against the whole correlation hypothesis, hold against this view of the subject, but as we have now passed to the deduction process of reasoning, it would be out of place to insist upon these here. It will be remembered, if not drawn immediately from the above quotation, that Dr. Carpenter contends that the "vital force" is *peculiar*, though metamorphosed from the "physical forces." We will make a single quotation to show this point;—"The accumulating evidence of the purely chemical nature of many of those changes of composition, which were set down as the results of 'vital affinity,' has led many chemists to the idea that the *whole series* of vital operations is to be explained upon chemical principles; and the notion of vital force has been set aside as a physiological fiction, for which there is no longer any pretence. *Feeling satisfied, however, that vital force has as certain an existence, and as definite a sphere of operation, as chemical affinity, the author will make it his endeavor in this treatise, so to analyze the phenomena of the living body, as to trace the respective limits of the operation of each of these powers.*" † I have already attempted to show that there is no such abstract force in physical nature as Dr. Carpenter contends for,—neither chemical, physical,

* Human Physiology, § 116, last edition.

† Human Physiology—Note on page 118.

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nor vital. But I only wish to show here that the phenomenon of living beings now under consideration, is not explained by this hypothesis. Passing along the street this morning, I stopped a few moments to contemplate a fountain where the water ascended some fifteen feet. According to Dr. Carpenter's method of explaining vital phenomena, we would explain this by saying, that through a peculiar "material substratum," the abstract force, gravitation, is metamorphosed into a peculiar "water ascending force," and the water descends after it has ascended fifteen feet, because gravitation, at this point ceasing to be metamorphosed into the peculiar "water ascending force," acts in causing the descent. According to Dr. Carpenter's method, steam, in the steam engine, does not act as an expansive force, but is metamorphosed into a peculiar abstract "car-moving force." Just as I would say, that steam, in the steam engine, acts in its legitimate direction, and that the motion of the cars is reciprocal with it through machinery; just as gravitation acts in its legitimate direction, and the ascending column of water is reciprocal with a descending column, so physical agents acting upon a germ-cell, act in their legitimate direction, and the peculiar vital actions are reciprocal with this legitimate action,—oxydation, through the special machinery of the germ; and the period of the "decay of the structure" does not "forthwith succeed the epoch of entire cessation" of life, but in the living cell, life is consequent upon oxydation. Dr. Carpenter must remember that not only heat, but oxygen and moisture, are essential conditions of life. When these conditions coexist, there is a *tendency* to chemical action; this tendency, according to Dr. Carpenter, or the cause of it,—an abstract "physical force," is forthwith metamorphosed into an abstract "vital force," by the germ-cell, and chemical action only occurs after the germ-cell has lost its occult power of metamorphosing the chemical tendency into vital tendency. This is all absurd, and contrary to all laws of physical nature as we understand them. In the next article we will continue the deductive method, and consider some other phenomena of living beings in reference to the general proposition at which we have arrived by the inductive process.

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Article III.

An Account of Medicine and Surgery as it exists among the Cree Indians. By a non-professional observer, who has resided for a number of years among them and is familiar with their language, habits and customs.

For the following interesting account of the state of medical knowledge among the Cree Indians, we are indebted through Dr. George Johnson of this city to Mr. John C. Tevis, who, during his residence in the Rocky Mountains prepared it from an unpublished work, on the manners and customs of the north-western Indians, by Edwin T. Denig, Esq. Ed.

"The Crees and Chippewas are famous for their skill in the treatment of the sick; and the cures said to be performed by them are not to be considered as altogether fabulous. No doubt much is to be attributed to the pure climate, temperate life, and simple habits of the natives: still they have great medical knowledge, in their way, in dressing wounds, and are acquainted with many roots, which by experience have been discovered by them to be efficacious, both as internal and external remedies. The practice of medicine amongst them, as with other tribes, often combine the powers of the Juggler, Prophet, Sorcerer, &c., and belongs alike to the male and female sex, though among the Crees there are but few practitioners of the latter sex. The practice is divided into two distinct modes, which are used separately, or conjoined, according to the urgency of the case, the disposition and means of the patient, or the will of the operator. One of these consists in the application of different roots, bleeding, sweating, and all visible natural treatment; the other an invocation of supernatural aid in the form of incantations, prayer, and other noises, accompanied by singing, drums, rattles, bells, and other instruments, sometimes requiring eight or ten persons to assist in this kind of music; on other occasions, the professor alone performing. Medical science among all Indians is considered more or less a supernatural gift, or at least those who practice it are thought to have arrived at proficiency by knowledge vouchsafed to them in dreams, or visions, in addition to their

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having, by long practice, and purchase from others, obtained an acquaintance with the roots and barks used. In fact, two agencies are sought: human knowledge as far as it can avail, and supernatural aid from the sun and moon; therefore, in small ailments not considered fatal—ordinary cuts, wounds, &c., natural remedies only are resorted to; but dangerous attacks, extensive injuries, and the like, where human skill appears doubtful, invocations, prayers, &c., accompanied by the singing and instruments named, are added. Where a fatal termination is apprehended, or in violent diseases of a doubtful tendency, the physician consults his dreams, as to the manner of treatment; and as failure is always attended by some risk, a cure is not promised until recovery appears certain. They do not, however, delay applying remedies, also singing and invocation—that dreams may come, and success crown their efforts. In the mean time, should the patient die, the blame is cast upon the supernatural powers that witheld their aid, or on the relations of the deceased for neglecting the proper ceremonies and offerings. This leaves the doctor a way of escape from exasperated relatives, who think *he* is to blame, and who often seize his property, or put him to death on the plea of having poisoned his patient.

Independent of superstition, we can safely say they have some good remedies, in the form of roots, flowers, leaves, and barks, that generally affect a cure in most incidental diseases and accidents, common to their manner of life. They are also careful and tender of their sick, more so of children than those of advanced age; and although the loss of a warrior and hunter be certainly the greatest that can befal a family, yet, judging from the lamentation, and other demonstrations of grief, bestowed on deceased children, one would suppose their loss to be the most severely felt.

The amount of medical attention awarded a patient is in proportion to the payment advanced. Their custom invariably is to pay the doctor beforehand, and pay well; if his whole time night and day be required, together with a full attendance of singers, drummers, and other assistants, the price would be enormous, and in a short time, would ruin the family. It frequently happens in cases of protracted illness, that

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the whole of the patient's property, together with that of his immediate relations, passes into the hands of the doctors, before, and often without a cure being effected. When a person has a severe attack of disease, or is badly wounded, a horse is sent to the doctor for the first fee: and smaller articles, such as kettles, blankets, cloth, &c., distributed to the assistants, together with feasts to all at intervals. A payment of this description would insure attendance for two or three days and nights—after which, should the patient grow worse, a larger payment would follow, increasing until such time as he died, or recovered; provided, he or his friends were able to pay, and if not, the visits would be discontinued.

The exhorbitance of these demands for medical attendance may not be considered unreasonable when we take into consideration the risk the professor runs in case of failure, also the very high prices he pays for his medicines. A small piece of root, not more than one inch in length is often sold for a horse, and the knowledge of its growth, appearance and locality, is paid for by three times that price. Moreover, the patient is taught to believe that by paying high for medical aid, thus making himself poor, supernatural intervention will follow. The extent an Indian can go is to give away all he has, and all he can get, to the doctors, for invocations to the sun and moon; thus rendering these payments a kind of sacrifice, indirectly propitiating supernatural aid. The sick person also promises other sacrifices to the same powers in case of recovery. The above is their custom in extreme cases, but when slight wounds or ordinary light attacks of disease are treated, no invocations are deemed necessary; the doctor is paid a moderate fee, applies his remedies, and renews them from time to time, without other ceremony.

The professors have but little knowledge of anatomy, could not distinguish the different bones of a human skeleton, but know the principal bones of the limbs—can replace a dislocation of the shoulder, but not of the hip joint. When an arm or leg is broken, be the fracture simple or compound, but without laceration, it is set as nearly in the natural shape as possible, regulating the setting by compression with the hand until the bones are supposed to be joined, then splints made of birch bark, fitting

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the limb, are laid on, and the whole firmly secured by a skin bandage. If the flesh is not wounded, (as by a bullet, or otherwise,) the splints remain, and the whole is not loosed until a junction or adhesion of parts takes place, generally not before an entire cure is effected, unless great tension compels them to slack it a little. But in case of extensive wounds, cuts, stabs, or limbs lacerated by bullets, the bandages are removed once in twenty-four hours, and a root called "*moos coo sôot e sé e sis*" applied, some of which is chewed and placed on the sores. These are also washed at the same time with a decoction of other roots, indeed all these remedies are composed of from three to ten different kinds of roots and barks, boiled, and the decoction applied. If no benefit is derived from one combination, in a few days this is laid aside, and others tried, until the patient finds relief. These washings and fomentations keep the sores clean, and by attention to their effects they have discovered the most useful for different complaints. It is to be regretted we do not know the botanical names of these roots and herbs, many of which are no doubt peculiar to their country, and might be found valuable in medical practice elsewhere. The Crees have a great variety of them, but the knowledge of their properties and application of them in diseases is confined entirely to the medicine men.

To preserve their medicines from wet, they are rolled up separately in small sacks and pieces of skin, and the whole enclosed in a tube, made of birch bark, something in the form of a telescope case. This, when they travel, is carried, and when they camp is hung up inside the lodge—is strong and elastic and impervious to rain or damp.

These Indians have a knowledge of the circulation of the blood, which they describe, as two "*sets of veins*," one of which (the veins) will stop bleeding of their own accord, the other (the arteries) requiring to be bandaged. Though they know the division of a large artery causes death by bleeding, yet they cannot, or do not, take it up, or secure it by ligature; and as may be supposed, when they rely altogether on roots and compression to stop arterial hemorrhage, death often ensues. Nevertheless, they often do succeed in stopping arteries when divided below the knee and elbow joints; which is done

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by chewing and applying as a styptic, a root, called by them *Mus too so'o sai pè* (Rascine a beouf), and securing the same by a tight bandage. This is not touched, unless great pain compels its being loosened a little, until the orifice of the wound is filled with clotted blood, and then only to renew the application of this and other roots in the same way.

They never amputate a limb, though they can take off the fingers and toes at the joints with tolerable expertness; but when the extremities are much mangled, and the bones crushed, though they make an attempt at a cure in the same manner as pointed out, by tying up the same with splints in the best way they can, yet mostly union of the bones does not follow, and finally terminates in a lingering illness, and death. Severe stabs or gunshot wounds in the body, are often cured by roots, and attention; but we imagine this is when no vital part is attacked, for when the lungs, heart, liver or bowels are pierced, they usually fail in all their endeavors to restore the sufferer, although they pretend they can even restore a portion of the intestines if destroyed.

Fevers are very rare in these high latitudes, are never epidemic nor contagious, but are mostly inflammatory symptoms attendent on other diseases, such as quinsy, erysipelas and phthisis pulmonalis in men, or puerperal, peritonitis, and other inflammatory diseases incident to delivery of women. In all cases where an unusual acceleration of the pulse is remarked, together with headache and other febrile symptoms, resort is had to the "sweat house:" this is repeated every day, and in some instances is followed by immediate immersion in cold water, which treatment, strange to say, often effects a cure: it invariably gives relief to chronic rheumatism, and severe catarrhs, but when used in small pox, measles or erysipelas, always proves fatal. If the patient experience any local pain, cupping is performed by a short hollow horn, and the vacuum produced by suction, the part scarified with a flint stone, and blood in this way extracted. Great relief is often given by this operation in rheumatic affections, tumors, and inflammations, arising from wounds. Bleeding is also common to reduce fever, and is performed by opening a vein in the arm or leg, with a sharp flint, or arrow point, which is

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tied into a split in a small stick, leaving only as much as is intended to enter the flesh protruding from the stick, it is then laid on the vein and struck suddenly with the thumb or forefinger of the operator. They usually let a vein run as long as blood will flow; but, if necessary, stick up the cut with an awl and sinew. They have no preparations answering the purpose of healing salves except the turpentine oozing from the balsam fir tree, which is used with efficacy in small cuts, and frozen parts. It must be recollected that in all internal diseases, pains, &c., whatever may be the local treatment, decoctions of roots are also given in the manner specified, varying them as their effects appear beneficial or otherwise. When a cathartic is wanted, the bark of a shrub, called by them *Ah-tos-pé*, is boiled, and about a pint of the decoction drank, which operates in a few hours. Likewise, for an emetic, the bark of the *pem bi nah* tree is used to advantage. Tea made of the wild sage is found useful in fevers, and cutaneous eruptions; and when poisonous substances have been received into the stomach, the contents are ejected by the above emetic, afterwards gunpowder in a state of solution is freely given to drink. In most marshes, there grows a root, called by the inhabitants of that country, *man i to' skah tàs* (or carotte a moreau) which is very poisonous, and when eaten produces cramps, ending in death in a few hours. Another peculiarity of this herb is, that the stalk in the evening is said to move to and fro, which movement is accompanied by a sound something like the ticking of a clock, though louder, but upon approaching the plant within a few paces both sound and motion ceases, and upon retiring a short distance commences again. It is not used in medicine.

Men never interpose their skill in cases of parturition. These patients are always attended and assisted by old women, though the doctor is near by, and prescribes infusions of roots and herbs to drink, being informed at intervals of the progress of delivery. To eject the fœtus, and also the afterbirth, the rattles of the snake are given, in the form of powders, as also the tea made of the scrapings of deer's horn, boiled in water. Castorum is also employed for this purpose, together with other remedies, some of which preparations possess strong deobstruent properties.

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Sick or wounded persons are, in traveling, transported on a horse, litter, or "travaille," but when disabled in battle, in an enemies country, they are carried on the back of the survivors by turns—sometimes in a robe or blanket, a man holding each corner. All other assistance in their camps and homes is afforded by careful handling, but they have no mechanical contrivances for this purpose. None of their medicines, or their treatment appear to be the least beneficial in small-pox, bleeding, the vapor bath, the cold bath, roots, and every remedy with which they are acquainted, prove equally useless. Whether the person be submitted to medical treatment or not, in eight cases out of ten, death ensues. We do not know how to account for the extreme fatality of this disease amongst Indians, unless it be their organization is particularly adapted to receiving the infection in its confluent form, which in almost every instance is fatal. The few who do recover, principally women and children, have mild attacks of the distinct kind, but many die of congestion of the brain by the fever before any eruption appears. No question but the sweat house increases the fever, and cold applications and immersions determine the circulation towards the head, producing death in both ways; but we do not see that they succeed better in treatment—one would suppose to be judicious, as bleeding, purging, &c., to reduce the fever, and opening the pustules—neither are they more fortunate when left without aid, except as stated, when the disease appears in such a mild form that nothing is required to effect a cure.

It will thus be seen, that their reputed success in the cure of many diseases is to be attributed to their experience in discovering such roots and herbs as are known to be efficacious, these are admixed and compounded, not by botanical knowledge of their properties, but from a long course of experiments regarding their effects—much of which knowledge has descended from their ancestors through the medicine men—the rest may depend upon great care, good constitutions, and a healthy climate.

The above is extracted from a work "on the Manners and Customs of the North-western Indians," by Edwin T. Denig, Esq.

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Article IV.

Poisoning by Tartar Emetic.—Recovery. By W. H. Tingley, M. D., *Member of the Academy of Natural Sciences, etc.*

In the month of January last, while residing in another city, I was requested by a gentleman, thirty years of age to give him a prescription for some slight intestinal derangement, a saline being indicated I gave him the following prescription:

℞ Sodæ et potassæ tartratas		ʒ iv
Sodæ sulphatis	. .	℥ i
Tinctura Sennæ	. .	ʒ ii
Aqua menthæ viridis	.	℥ ij. M.
Half to be taken at once.		

It was taken according to directions, and in twenty-five minutes or thereebouts, a messenger informed me that my patient was dying, that he began to vomit in fifteen minutes, after taking the "stuff". I hastened to his house and found him greatly prostrated, with cold clammy skin, almost imperceptible pulse, violent colicky pains, distressing cramp, large and frequent discharges of serous fluid, resembling the pathognomonic "rice water" of cholera, *per orem* and *per anum;* his intellectual functions were unimpaired, I at once, suspected a mistake had been made in the prescription by the apothecary, and judged from the symptoms that tartar emetic had been substituted for the Rochelle salt, in this I was not mistaken. I accordingly administered the first vegetable astringent at hand which was green tea: shortly afterwards, as soon as it could be prepared, I gave him enemata of tincture of galls and a small quantity of tincture of opium in starch mixture, and by the mouth a teaspoonful of brandy with three drops McMann's opium every half hour; the cramps were relieved by sinapisms to the epigastrium and legs.

For two hours his life was in such eminent danger that I could not, with confidence, give an opinion of his case, although strongly importuned by his friends. Fortunately, the inherent power of his constitution were adequate to overcome the

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destructive force of the poison. In four hours from the invasion of the symptoms, he was out of danger from the poisonous or depressing action, but I feared consecutive inflammation in the lungs and intestinal canal.

On inquiry at the store where the prescription was compounded, the clerk who had performed that duty denied having made any mistake, and even showed me the bottle from which he obtained the Rochelle salt, I however succeeded in finding the mortar which had been used, and in it crystals, which on analysis, proved to be tartar emetic. On informing him of this fact, he confessed that he was sleepy when he prepared the medicine, and did not know, exactly, from whence he obtained the component articles of the prescription, but that I had got hold of the mortar which he used.

The quantity contained in the dose taken should have been, as will be seen, on referring to the directions, two drachms, but all of this might not have passed into the stomach, partly by reason of the insolubility of an antimonial salt in a solution of soda, and partly, because the quantity of the drug would have required forty ounces of water for its perfect solution; but my patient observed a white powder in the bottle, and shook it up well before using: he might, consequently, have taken more, even than half the quantity contained in the bottle.

According to Magendie and Rayer, tartar emetic induces inflammation in the lungs. Knowing this opinion, emanating from such high authority, I made a careful physical examination of those viscera twice, daily, for two or three days, to discover any change that might take place, but I found nothing abnormal. The most annoying consecutive symptoms were irritability of the stomach, and accumulation of *flatus* in the intestinal canal, these conditions I overcame with strychnia.

There is one curious fact in connection with this case, the individual had consulted me two days previous to taking the dose, which had jeopardized his life, for a papular cutaneous eruption of syphilitic origin. After his recovery this entirely disappeared, nor has it ever returned.

There are some points in this case which have an important medico-legal bearing. From the nature of the symptoms—

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here so closely simulating cholera, might not tartar emetic be given, in large doses, with nefarious intentions, at a season when cholera is prevalent, and not even the physician suspect the disease to be aught but the prevailing epidemic. Had this case occurred when cholera was rife, I should have had slight hesitation, had I argued only from the symptoms, and without knowing the history of the case, in pronouncing it one of cholera.

Article V.

False Diagnosis—Supposed Syphilitic Disease—Value of the Speculum. By H. C. Marthens, M. D., *of St. Louis.*

A robust and young woman consulted me in relation to a long continued and copious discharge from the vagina, sometimes of a light, but mostly of a dark color and of a very fetid odor. This had persisted for several months, attended occasionally by pain. A physician was consulted, who, guided solely by the patient's detail of symptoms and a knowledge of her mode of life, pronounced the ailment syphilitic, and therefore placed her under the use of mercury, until ptyalism supervened. There was no abatement of the vaginal excretion.

Another and much more eminent practitioner was called in. Again, without the preliminary use of the speculum, the patient was subjected to a course of mercurials, so severe that sloughs separated from the mucous membrane of the cheeks and gums. Still the fetid discharge continued. At this stage the patient fell under my observation. Upon learning the history of the case, as now detailed, I judged the speculum would throw some light upon the case. An examination revealed a dark substance, soft and yielding, at the further extremity of the vagina. The speculum was withdrawn; two fingers inserted, caught the foreign body and removed it. It was a *piece of sponge*, the size of an English walnut, and of a perfectly black color. No disease of the os uteri or vagina was discovered, except several small superficial abrasions, caused no doubt by long continued contact with the sponge. The ichor-

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ous discharge ceased at once, and in three or four days the patient considered herself well.

The woman confessed that seven months previously she had inserted the sponge to arrest a menstrual flow, and as she had noticed the discharge of several fragments she supposed the whole had come away.

PROCEEDINGS OF THE MEDICAL ASSOCIATION OF THE STATE OF MISSOURI,

LEXINGTON, APRIL 10TH, 1855.

The fifth annual meeting of the *Medical Association of the State of Missouri*, convened this day, pursuant to adjournment, at 11 o'clock, A. M., in the Court-House in the city of Lexington.

Dr. J. B. Alexander, the Secretary, read a letter from the President, Dr. Charles A. Pope, expressing his regret at being unable to attend; and none of the Vice-Presidents being present, upon motion Dr. J. B. Johnson was called to the chair.

Dr. Johnson, upon taking the chair, requested Rev. B. M. Hobson to open the meeting with prayer, after which he delivered an appropriate address.

The committee of arrangements reported the following gentlemen in attendance:—

Drs. J. B. Johnson and Wm. M. McPheeters, St. Louis. Drs. O. B. Knode and J. A. Chambers, St. Joseph Medical Society. Drs. John Vaughn, T. H. Fox, and E. S. Arnold, Lafayette County Medical Society. Dr. John Montgomery, Jackson County Medical Society. Drs. R. G. Buckingham, J. S. Long, W. P. Boulware, J. F. Atkinson, S. T. Hamm, and J. B. Alexander, Lexington Mo., permanent members. Drs. S. T. Meng, and P. H. Chambers, Dover, Lafayette county, Mo.

Dr. Buckingham moved, that Drs. G. W. Young, M. Chapman, G. W. Shewalter, and F. Cooley be elected permanent members. Carried unanimously.

Upon motion the Association took a recess for a short time, to allow of the appointment of a committee of three, from each

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Congressional District, to compose the Committee on Nominations.

At the re-assembling of Association, the following were announced as the committee:

Drs. J. B. Johnson, and Wm. M. McPheeters, first Congressional District.

Drs. John Vaughn, P. H. Chambers, and John Montgomery, fourth Congressional District.

Drs. O. B. Knode and J. A. Chambers, fifth Congressional District.

The remaining Congressional Districts were not represented.

The committee on nominations recommended the following gentlemen as officers for the ensuing year:

For President—Dr. JOHN B. ALEXANDER, of Lexington, Mo.

For Vice-Presidents—Drs. J. S. B. ALLEYNE, St. Louis, J Wilcox, Rocheport, J. S. Long, Lexington, James Sykes, St. Joseph, and Dr. Bull, Hannibal.

For Secretaries—Drs. W. P. Boulware, Lexington, and E. F. Smith, St. Louis.

For Treasurer—Dr. G. W. Shewalter, of Lexington.

Upon motion the report was adopted.

Dr. Alexander upon taking the chair expressed his appreciation of the honor conferred upon him, by being chosen the presiding officer of the association; alluded to the discouraging appearance and prospects of the organization, but hoped it was due in part, to other causes than the apathy of the profession; and declared his determination to be the last one to abandon the Association.

Upon motion the association adjourned to meet at three o'clock, P. M.

AFTERNOON SESSION.

The association met at 3 o'clock, P. M., pursuant to adjournment, the President, Dr. Alexander, in the chair.

Upon motion Dr. Wm. H. Ruffin and J. Bull were elected permanent members.

Reports from standing committees being now in order, Dr. McPheeters presented a report on the poisonous effects of the fumes of charcoal. The report was read and received.

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Dr. Alexander stated that he was not ready to report on the Therapeutic value of Electro-magnetism, and asked for farther time; which was granted.

No other standing committees reported.

The committee on nominations begged leave to submit a report, which was received after some discussion, and adopted a follows:

Next meeting at St. Louis, 2d Tuesday, April, 1856.

Committee of Arrangements—Dr. Wm. Webb, Chairman Drs. E. S. Lemoine, S. Pollak, J. H. Watters and Golding.

The committee recommend that the special committees, appointed at the last meeting of the association, who are not prepared to report at the present meeting, be continued, and that the Secretary be instructed to inform them of the fact, and also the subjects assigned them; and that the following additional committees be appointed:

1. Inhalation with reference to its therapeutic value—Dr. McPheeters, of St. Louis.
2. Typhoid Pneumonia—Dr. Ruffin, Lexington, Mo.
3. On the Action of Quinine—Dr. W. M. Belt, Independence, Mo.
4. On the Endemic diseases of Jackson county, Missouri—Dr. John Montgomery, of Independence.
5. On Dystochia—Dr. Leo Twyman, of Independence.
6. Scrofula and its treatment—Dr. Samuel T. Meng, Dover, Lafayette county, Mo.
7. Injuries of the Head—Dr. James Sykes, St. Joseph, Mo.
8. Typhoid Fever—Dr. G. C. Catlett, St. Joseph, Mo.
9. Malarious Fever—O. B. Knode, St. Joseph, Mo.
10. On Ventilation—Dr. James Blake, St. Joseph, Mo.
11. Chloroform and its Uses—Dr. John A. Chambers, St. Joseph, Mo.
12. Endemic Diseases of Buchanan county—Dr. J. H. Crane, St. Joseph, Mo.
13. Galvanism as a Remedial Agent—Dr. D. L. Henry, St. Joseph, Mo.
14. Pernicious Intermittent—Dr. A. H. Robertson, St. Joseph, Mo.
15. On Croup—Dr. Webb, of St. Louis.

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16. Inquiries of the Astragalus—Dr. Samuel Wolff, of Independence, Mo.

17. On Syphilis—Dr. E. F. Smith, St. Louis.

18. On the Cancer Cell—Dr. J. H. Watters, St. Louis.

19. Medical Biography of the West—Dr. John Barnes, St. Louis.

20. Tubercle—Dr. J. B. Johnson, St. Louis.

21. Equivocal Generation—Dr. Payton Spence, St. Louis.

22. Corea—Dr. P. H. Chambers, Dover, Lafayette county, Missouri.

23. Epidemic Dysentery—Dr. E. G. Arnold, Lexington.

24. Erysipelas—Dr. John S. Long, Lexington.

Dr. Alexander stated that, in pursuance of previous appointment, he had prepared a circular, and had distributed quite a large number of them. He was, on motion, continued on the same committee, with the privilege of associating two other medical gentlemen with him.

Dr. Buckingham offered the following preamble and resolution, which was adopted unanimously:

Whereas, in the opinion of this association, the best interests of the Medical profession of our State would be promoted by fostering and encouraging our home medical literature, as being the best and surest method of developing the talent in our midst; therefore,

Resolved, That we recommend to the physicians of this State, to use all the means in their power to extend the circulation of the St. Louis Medical and Surgical Journal, and to make it the medium of communicating to the profession at large the result of their observation and practical experience.

On motion, Dr. W. A. Gordon was elected a permanent member of this association.

Upon motion, Dr. Sanford F. Smith was elected a permanent member.

Upon motion, the annual tax for the present year was fixed at three dollars.

Dr. Knode offered the following resolution which was carried:—

Resolved, That Dr. Wm. M. McPheeters be authorized to select such matter as he deems proper, from the unpublished

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report of this association, now in its archives, to be published in the St. Louis Medical and Surgical Journal.

Dr. Long offered the following resolutions, which were passed by acclamation:

Resolved, That the Medical Colleges of the West, for their zeal and earnest labors in the cause of Medical Science, are entitled to the warm regards of this association, no less than to those of the medical profession of this great valley.

Resolved, That we recommend to the members of this association, as also to the great body of physicians throughout our own, and to those of our sister States, to give their cordial support, and encouragement to such medical schools in our midst, as whilst they embrace within their system of instruction all the branches pertaining to medical science; also insist upon the rigid performance both on the part of teacher, and pupil, of the requirements of the American Medical Association.

Dr. Long also offered the following resolution:—

Resolved, That after this meeting, no gentleman shall be elected to any office, or appointed on any standing or special committee of this association, who is not either a permanent member, or a delegate to the meeting at which he is appointed.

Pending the consideration of which, the association on motion, adjourned until Wednesday morning, 10 o'clock.

WEDNESDAY MORNING, APRIL 11.

The association met at 10 o'clock, pursuant to adjournment. Dr. Alexander in the chair.

On motion, the reading of the minutes of the previous meeting was deferred.

On motion of Dr. Long, Dr. Renick was nominated and duly elected a permanent member of this association.

The resolution of Dr. Long, offered Tuesday evening, was called up for consideration, and after a free and full discussion, was unanimously adopted.

On motion, the President and Secretary of this association were authorised to appoint the delegate to the American Medical Association.

Dr. Long offered the following resolution, to-wit:

Resolved, That the committee appointed to distribute circu-

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lars to the physicians of the different counties, be instructed to request voluntary contributions on medical subjects, to the State Association, which was passed.

On motion, Dr. Robert B. Smith was elected a permanent member of this association.

On motion, the Secretary was instructed to write to the former Secretary of this association, for a list of the names of the standing committees.

Dr. Long gave notice that he declined accepting the appointment as chairman of a committee to report to the next association.

On motion, the Secretary was instructed to furnish a condensed report of the proceedings of this association, for publication in the city paper.

On motion, the association adjourned to meet in St. Louis, on the 2d Tuesday in April, 1856.

JOHN B. ALEXANDER, *President.*

Wm. P. Boulware, *Secretary.*

PART II.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

Article I.

An Essay on the Contagious Character of Malignant Cholera; with brief Instructions for its Prevention and Cure. By Bernard M. Byrne, M. D., *Surgeon U. S. Army. Second edition with additional notes by the author. Philadelphia; Chiles & Peterson*—1855—*pp.* 160.

Dr. Byrne was one of the earliest and ablest advocates in this country of the contagiousness of cholera. The first edition of the work before us was issued in 1833, when the doctrine for which it so earnestly contends could claim but few advocates on either side of the Atlantic. Since that time, physicians every where have had the most ample opportunities of studying the disease, witnessing its progress, and form-

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ing their opinions in reference to its mode of propagation—unfortunately from their own experience—and while the question is by no means settled, whether it is, or is not a contagious disease, in the ordinary acceptation of that term, yet the number of those who now contend for the contagiousness of cholera is far greater than at the time this essay was first published. Dr. Byrne himself tells us, that it was then an unpopular doctrine, especially with the medical profession, nor is it yet a very popular doctrine; that is to say, one generally received, although it must be admitted, that contagion has received many and able allies in this country, since the last invasion of cholera in 1848.

From a careful review of all the facts in reference to this disease which have come under our own observation—and they have not been few in number, nor limited in extent of time; we must say that we have not seen evidence enough to convince us that cholera is a contagious disease, yet we are free to admit, at the same time, that there are many well authenticated facts, which seem to favor that idea, without by any means settling the question.

The present edition is simply a reprint of the first, with additional notes by the author. So well satisfied is the author with the work as it first came from his hands, that he does not deem it necessary to avail himself of any additional evidence, which subsequent experience may have afforded in support of his positions. On this subject he says: "In republishing this essay, I do not consider it necessary to add any of the many thousands of new facts, which can be adduced to prove the contagiousness of cholera. My reason for not doing so, is this:—I have already published in this essay, twenty-one facts of a positive, indisputable, and unequivocal character; and it appears to me, that the mind which cannot be convinced by these twenty-one facts, cannot be convinced, were I to present to it twenty-one thousand facts of a similar character."

This mode of reasoning may seem conclusive to the author, but it seems to us, if his object is to carry conviction to the minds of all, that it would have been as well to add line upon line and precept upon precept, for the benefit of those who do not admit the full force of the author's facts and arguments.

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The first chapter is on "Contagion in General." "There is no distinction," he tells us, "except a hypothetical one, between contagious and epidemic diseases; nor is there more than one general law by which contagious diseases may be characterized."

After alluding to the loose manner in which the terms contagion, infection, epidemic and endemic are employed by medical writers, he goes on to state that, "all diseases may be divided into two classes, *specific* and *accidental:* specific, those which have a *poison* for their remote cause; accidental, such as result from any cause (except a poison) which disturbs the balance of health." Specific diseases he divides into "*progressive* and *local*," the former having an *animal* poison for their remote cause, and are all contagious; "or in other words, are communicable, either mediately or immediately, from one human body to another." Contagion and infection he regards as synonymous terms. Without pretending to follow the author in all that he says on the subject of contagion in general, we must content ourselves by stating the conclusions to which he has arrived. "First, that progressive and contagious diseases are considered as synonymous; secondly, that by the term contagious, are designated all diseases which owe their existence to animal poisons, whether these poisons be communicated by actual contact, or through an indefinite extent of atmosphere; thirdly, that by the term epidemic is signified no particular class of disease, but the extensive prevalence of any disease; and fourthly, that local diseases are not contagious, and therefore are limited to particular districts."

The remaining chapters, eleven in all, are devoted to the discussion of Progressive atmospheric influence; Local atmospheric influence: Terrestrial emanations; Human intercourse; General and particular facts; Objections of the non-contagionists; Evils of the doctrine of non-contagion; Prevention of cholera and Treatment.

Without wishing to endorse the views of Dr. Byrne, we take pleasure in recommending his work as presenting a brief, but able exposition of the views of the cholera contagionists.

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ARTICLE II.

An Outline of Medical Chemistry, for the use of Students. By B. HOWARD RAND, A. M., M. D., *Professor of Chemistry in the Philadelphia College of Medicine, &c., &c. Philadelphia; Lindsay & Blakiston—pp.* 254—1855.

The object of this little work is expressed by its title, "An Outline of Medical Chemistry," which outline is to be filled up by aid of text-books or of lectures. It purports to present such facts as are of the most importance, in such a form as to be of easy reference for review. We agree with the author, that "the science of chemistry has grown to be one of such extent and intricacy, that its study demands the undivided attention of those who would be thorough chemists," and that to expect this of medical students or even physicians is unreasonable. Such works, if used in their proper place, may be useful to students, but if allowed to supersede more elaborate treatises are positively injurious.

ARTICLE III.

Letters on Yellow Fever—the Cholera and Quarantine—addressed to the Legislature of the State of New York, with an appendix, containing correlative correspondence, and an act of the Legislature of the State, relative to the public health, with suggested amendments. Second edition revised. By ALEXANDER F. VACHE, M. D., *formerly resident physician to the Alms House Hospital; State Commissioner of Health to the Marine Hospital, Staten Island, &c., &c.*

The letters composing this volume were written in reply to an enquiry made by a committee in the Legislature of New York of the author, as to whether "yellow fever be conveyed from one place to another, through the medium of vessels, merchandise, clothing, or prisons," with the view of "ascertaining if the quarantine laws can be modified with safety to

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the health of the community, and rendered less oppressive to the commercial interests of the country."

The author goes somewhat at length into an examination of the origin and spread of yellow fever. He regards it as of foreign origin and imported to this country by means of our commerce, and of course, a communicable, or what is the same thing, a contagious disease.

The yellow fever is one of those unfortunate diseases, the paternity of which has never yet been acknowledged—a disease which originates no where, but which regularly prevails in particular localities during certain seasons of the year. Entertaining such views, the author, as might be expected, is an advocate for stringent quarantine regulations. Time will not permit us to analyse the facts relied on by the author as establishing the importation of the disease into New York, and we must therefore dismiss the subject with a single remark, and that is, that so far as New Orleans is concerned, we believe the profession have arrived at a very different opinion, and generally regard the yellow fever as of local origin.

So far as the quarantine is concerned, we cannot allow the occasion to pass without again recording one protest against the efforts which have been made in different quarters, to fasten upon us that miserable quarantine system which has for so long a time oppressed and retarded the commerce of Europe, and that too at a time when the whole system is becoming odious in the eyes of the most enlightened nations of the old world, and is about to be abandoned as a relic of the dark ages. We think that it may be clearly shown, that so far as regards contagious diseases, quarantine affords but little, if any protection, while it acts as an incubus on commerce, and is an outrageous interference with the rights of individuals. These remarks do not of course apply to Emigrant Hospitals, which are of the utmost importance and should be established in every seaport.

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ARTICLE IV.

Transactions of the Medical Association of the State of Alabama, at its Eighth Annual Session, begun and held in the city of Mobile, February 5th, 6th, and 7th, 1855. Together with the Code of Medical Ethics and a list of members.

This pamphlet of 148 pages is filled with able and interesting reports, and volunteer papers, and exhibits a degree of activity and ability which is highly creditable to the profession in Alabama. Some of these papers we have marked for insertion hereafter, while the whole volume is worthy of a much more elaborate notice than we are enabled at present to give it.

ARTICLE V.

On the Nature of Malaria, and Prevention of its Morbid Agency. By JOHN GORRIE, M. D., *of Florida.*

The prevalence of a disease in its variously modified forms, peculiar to warm seasons and climates, has naturally attracted the attention of medical men generally. The conditions under which Intermittent, Remittent and Yellow Fevers originate, have been studied with the hope of ascertaining a specific cause, that knowing the cause, means might be adopted to frustrate its injurious effects upon the human system. This subject has been a beautiful field for speculative minds to exercise their ingenuity. The main object of the above named pamphlet is to present what its author considers a practicable means of "preventing the effects of Malaria." He contends, that "Malaria" is a "volatile oil," but says, as to the means proposed for "the prevention of its morbid effects, it matters very little whether it consists of a gaseous or vaporous poison, a vegetable, animal, or product conjoined of both species of organic matter, fungi, animalculæ, or any other conceivable substance. The author thinks his plan "may be made, by giving immunity from Malarial disease, eminently auxiliary towards enlarging the boundaries of geographical discovery;

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and, in connection with it, administer, by extending the channels of commerce, to both the delight and benefit of mankind. Protected by such a means of maintaining health and comfort, we might dwell with safety, and pursue any business of life, in the harbors or cities of Vera Cruz, Havana, Sierra Leone or Batavia, or explore at our leisure the æstuaries and geographical characters, or collect and examine the natural productions of New Guinea, the Orinoko, the Niger and the Amazon, or the sources of the Congo and the LaPlata."

What a glorious anticipation! The plan proposed is to cool the rooms occupied at night by means of ice. As to the mechanical contrivance the Doctor says: "My whole process consists in, first, suspending an ornamental mantle vase, urn or basin, in which the ice is placed, by chains, like a lamp or chandelier, from the centre of, and close to the ceiling of a room. Next, over this vessel an opening is made in the ceiling from which a pipe is extended, between the ceiling and the floor above, to the chimney of the house. It is made to enter the chimney for an important auxiliary purpose, which will be presently explained; and through it and the pipe, instead of the doors and windows, all the air, as far as possible, required for respiration or the combustion of lights, ought to be received. As a free and unimpeded current of air must be allowed to pass through the room, so as to maintain thorough ventilation, and prevent the pernicious effects of the fœtid exhalations arising from the human body and combustion, there must be, third, a similar but shorter pipe, with a self-acting adjustable valve, communicating with the interior of the room, on a level with its floor and the open air."

He says that ice would not be necessary in the heat of the day, as "heat also has the power of decomposing Malaria," and hence, it is only at night that this means of protection is required. According to the doctor, the "chief advantage" of having the pipe for the admission of air to communicate with the chimney, "is derived from the chemical affinities of the soot."

When will men cease to substitute the results of the imagination and the fancy, for that of exact and sound reason?

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PART III.

RECORD OF MEDICAL SCIENCE.

Sedative Powers of the Root of Yellow Jessamine. By Dr. Cleaveland, of Cincinnati.

For some time past the profession in the west and south have had their attention called to the root of the *Gelseminum Sempfuvirens* or Yellow Jessamine, as possessed of very wonderful and valuable remedial properties; even those of the most opposite and contradictory nature having been ascribed to it.

The history of the discovery of its power is said to have been as follows: A planter of Mississippi, whose name is not remembered, while laboring under a severe attack of bilious fever, which had not yielded to the remedies used, sent a servant into his garden to procure a root and prepare an infusion of it for him to drink. The servant, by mistake, collected the root of the Yellow Jessamine, made an infusion of it, and gave it his master to drink. Soon after swallowing some of it, the planter lost his muscular power, so as to be unable to move a limb or to raise his eyelids; while he could hear and feel, and exercise his usual faculties as well as in health.

His friends became much alarmed at his great prostration, but after some hours he recovered his muscular powers, and was highly pleased to find himself free from fever. He soon learned from his servant what plant it was from which he obtained the root, and trying its effects upon the people of his own plantation and those of his neighbors, he ascertained that he had a valuable remedy for fevers. The use of the article became known to a quack, who prepared from the Gelseminum a nostrum which he styled the "Electrical Febrifuge," which was simply the tincture of the root of the Gelseminum, prepared with dilute alcohol, and disguised with the essence of winter-green.

After a time the true character of this tincture became known to the profession, and at the present time it is being used very frequently by many of this part of the country, who however seem, from their reports, not to have a very clear

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idea of its action on the system, or the class of cases for which it is indicated.

I have tested it uncombined with any other medicine, until I am satisfied that it is one of the most valuable *sedatives* at present known to the profession—and particularly valuable, as it expends its force mainly upon those nerves that are distributed to the muscles of locomotion, leaving entirely unaffected the intellectual faculties, and probably the great ganglionic system of nerves.

We have in the *Aconite* a valuable sedative to the nerves of general sense, or an anæsthetic to those nerves which, when infringed upon, cause the sensation of pain—a real *pain-destroyer*—so far as the superficial sensatory nerves are concerned—hence its value as an external application in all painful conditions.

In the *Veratrum Viride* we have an excellent sedative to the muscular system and to depress vascular excitement; but, while it depresses the Vagus nerve, decreasing the frequency of the contractions of the heart, and deadening the sensibility of the lungs, and thus relieving them of the sense of a *want* of breathing, it also sometimes *deranges* the *gastric* nerves, producing such an amount of nausea, and even vomiting, as to preclude the further use of the remedy. It also not unfrequently induces such free catharsis as thus to greatly injure the patient, if its use is continued.

These objections do not obtain against the Gelseminum, for while it proves a most powerful sedative to the nerves supplying the muscles of locomotion, as in the case of the planter who first took it, it never seems to produce the slightest effect upon the brain, or in the least degree to derange the stomach or bowels.

It *does* lessen the pulse and the frequency of respiration, and while it produces a wonderful relaxation of the muscles, it relieves all sense of pain by acting upon the nerves of general sense, in a manner similar to Aconite.

Usually not more than thirty or forty minutes elapse after the agent is taken into the stomach before the sedative is experienced—and if the dose be not repeated, its influence will continue only for an hour or two. Many practitioners, however, seem not to be aware of this, and order doses, in my opinion, unnecessarily large, and repeat them only once in six or eight hours.

As yet the Gelseminum has been but little used, except in the form of a tincture prepared with *dilute* alcohol; but, as in the instance of its first trial, experience proves that the *sedative* property is fully soluble in water; and the experience of some in New Orleans, who made use of a tincture prepared

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with *strong* alcohol, would indicate that the root contained a dangerous resinoid substance, readily soluble in strong alcohol, but not soluble in dilute liquor or in water. Some *deaths* even occurred in that city, which were supposed to be produced by this poisonous resinoid principle.

The dose of the saturated tincture, with *dilute* alcohol, is from *three* to *thirty* drops, and I think it much better and safer to give small doses frequently repeated, than to risk a too large dose of a powerful sedative medicine.

I need not call the attention of your readers to the great variety of cases in which sedatives are indicated, and in which those that act as Lobelia or Veratrum do, on the stomach or bowels, are *contra*-indicated. Perhaps no other class of agents would be more frequently resorted to than these, did the profession feel sure they could command the agent which would produce the desired effect.

From sufficient personal experience, as well as from the observations of many physicians who have used this preparation, I am satisfied, that as a sedative to the nerves branching from the spinal cord, and going to the organs of locomotion—or the nerves of voluntary motion, and in a lesser degree the Vagus and sympathetic branches of nerves that are distributed to the heart and the lungs, inducing a less powerful and less frequent pulse, and a more sluggish and feebler respiration, the Gelseminum will prove highly satisfactory to any who may give it a trial.

It has had ascribed to it tonic, alterative, anti-periodic, anti-phlogistic, anti-spasmodic, diaphoretic, diuretic, and perhaps many other anomalous and contradictory properties; but, like the laudations of many foolish friends, so much has been said, that but little, if any, of these statements by many have been believed.

It *may* be possessed of other powers, but my most careful testing of the drug has revealed to me only its sedative powers.

[*American Medical Gazette.*

Iodine Gargles in Salivation.—An East India physician reports favorably of the efficiency of gargles of the compound tincture of iodine, both as a remedy and as a prophylactic of mercurial salivation; and gives several cases in which incipient ptyalism was arrested and cured by this remedy. He uses two drachms of compound tincture to eight ounces of water. We have found Lugol's solution, diluted, to answer equally well. Another physician reports equally favorably of the extract of belladonna in doses of two and a half grains. The remedy has a powerful effect in arresting the secretions of the mouth and throat.

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On Preserved Meat-Juice.—By Robert Christison, M. D., *Prof. of Materia Medica in the University of Edinburgh.*

About 18 months ago, when consulted in the case of a relative of Mr. Gillon, the extensive and skilful manufacturer of preserved meats at Leith, I found that the patient was entirely supported in a severe illness, by the Preserved Juice of Meat, which had been given at Mr. Gillon's suggestion. Observing the readiness with which it was taken when other food of every kind was refused, I was induced to try it in other instances, and eventually to employ it in various states of disease. The results led me to suggest the use of it to many professional friends, and to advise the druggists of Edinburgh to keep it, so that it is now much in request, and may be easily obtained.

The substance is the pure juice of beef, preserved in the way in which meats and vegetables are now so extensively preserved in the fresh state, for store provisions. The mode of preparation is as follows: Cylindrical cases of tinned iron are filled each with six pounds and a half of beef; and the lid is soldered on, but with a hole about half an inch in diameter in the middle of it. Two trays of such cases are shoved into iron retorts, analogous in form to retorts for gas-making, but double-cased, so that steam may be introduced into the interstice around. They are thus subjected to a heat of 220° under steam pressure, for about three hours; by which the beef is partially cooked, and, being thus also made to contract strongly on itself, squeezes out a portion of its juice, amounting to a few ounces from each tin. The tins are then drawn, the juice is poured out, and the meat, with certain additions, is subjected to the preservative process. The juice, after being cooled and entirely freed from fat, is put into small four-ounce tin cases. Each of these has a small aperture at one end, which is secured by solder, after the juice is poured in. The tins are then subjected, on trays, to a temperature of 220° in a muriate of lime bath. On being removed, the solderer rapidly touches with his iron the solder on top, which giving way allows steam to rush out forcibly, and carry with it the air in the upper part of the interior. By the time he has thus swiftly passed over sixteen or twenty tins, the first is ready for being re-soldered by a similar dexterous application of his iron, which then in succession as quickly secures the whole opening and steaming apertures. The process of heating in the bath, tapping and re-soldering, is then repeated a second time, to make sure of the thorough expulsion of every particle of air. The tins finally are painted to preserve them against rust.

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The process is most perfect. I have repeatedly opened tins eighteen months in my possession, and stated to have been many months in store when I got them, and in every instance the contents had the rich delicate aroma and taste of fresh beef juice. Sometimes the taste is slightly resinous or soapy, in consequence of a little resin having obtained admission in the operation of soldering. But as this does not occur often, the impurity may be avoided with due care. The juice may be taken with relish in small quantity, either cold or warm, in its concentrated shape; but it is rather strong to be used without dilution. When diluted with three times its volume of boiling water, and duly seasoned with salt and pepper, it makes a more palatable beef-tea than any which can be made in the usual way. Sometimes, indeed, a patient will be found to prefer the ordinary sort, either because the preserved juice has unluckily been resinous, or on the same principle that leads some people from the plains of England to prefer hard water to the pure mountain springs of the primitive districts of Scotland, viz: because they are not accustomed to the finer sort. But this is not the general fact; and there can be no doubt that the preserved meat-juice makes a most palatable beef-tea, and an equally eligible basis for many soups.

Until about ten years ago, in concurrence with general opinion, I used to regard beef-tea as a highly nutritive article, not to be rashly or freely given during disease. My sentiments in this respect were shaken, when I ascertained, in the course of some experiments for adjusting the dietaries of the General Prison and the Royal Infirmary, that a pint of the very finest beef-tea contained scarcely a quarter of an ounce of anything but water. Since that time I have much more readily listened to the cravings of patients for beef-tea in even many acute diseases, and above all in protracted sub-acute diseases, and in chronic diseases with fever; and I have thought I saw that it maintains the strength almost like wine, lessens emaciation and weakness in tedious diseases, and does not occasion any increase of re-action. There is no disease in which these properties are more remarkably shown than in protracted cases of gastric fever, of which, by the way, I have seen an unusual number both in town and country, during the last three years. These cases have often lasted for six weeks, or,—with a relapse, from too early indulgence or exposure,—for the long term of three months nearly: during which little, or absolutely nothing else was taken, except beef-tea or diluted meat-juice; and without the attenuation and debility which so protracted a fever and want of appetite ought to have induced. In some instances I could scarcely doubt that life was preserved by this nutriment. It is unnecessary to particularize

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the various states of diseases in which the same practice has been followed. It is peculiarly applicable to all subacute protracted diseases, whether febrile or otherwise; and in all such there is even no great reason to hesitate in resorting to it when local inflammation is present. Every one, I think, will be struck by the readiness with which such patients will often take diluted meat-juice or beef-tea repeatedly, when they refused all other kinds of food. It should be given in the quantity of a teacupful at a time, every four or six hours; but it is well to alternate it with other simple nourishment, when the patient will consent to do so.

What is its mode of action? Not simply nutrient. A quarter of an ounce of the most nutritive material cannot nearly replace the daily wear and tear of the tissues in any circumstances. Possibly it belongs to a new denomination of remedies, whose action never was even suspected to exist until recently—those which, by some peculiar influence, diminish the waste of the tissues under the exercise of their function. Professor Lehmann has proved (*Annalen der Chemi*, 1853) that coffee possesses this singular property in so remarkable a degree, that in persons following an active occupation an infusion of an ounce of roasted coffee daily will reduce the daily waste by a fourth part; and the same property seems likewise to belong tea, and other restorative beverages. It is not improbable that the sapid and saline principles of meat, united in what is called ozmazome, and constituting the ingredients of beef-tea and meat-juice, possess some such property. It is difficult otherwise to account for the interesting results obtained by the late Dr. Edwards, in 1838, who, in his researches on nutrition,—strangely overlooked by the celebrated Gelatin Commission of the French Institute, in their condemnatory report on gelatin in 1741,—found that dogs die slowly if fed on bread and gelatin alone, but when thus greatly reduced, quickly regain flesh and strength by the addition of two ounces of meat-tea, which cannot appreciably increase their textures by its own insignificant amount of solids. Either it acts as a digestive ferment, so to speak,—promoting the assimilation of other nutriment—or, like coffee, it must lessen the waste of the tissues in the exercise of their functions.

Mr. Gillon's meat-juice contains only 6½ per cent. of solids. As a mere nutrient, therefore, it is much in the same category with beef-tea. Sixteen ounces of beef-tea, made with the contents of one tin, yield only 114 grains of solid extract. It contains no fibrin, no albumen, no gelatin. It does not even gelatinise, on exposure to the air for days: it is ozmazome, with the salts and sapid and odorous principles of meat, and materially different from all boiled extracts.

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I should add that no good beef-tea could be made so cheap as with this preserved meat-juice. A tin of four ounces makes sixteen of strong beef-tea. This much requires, in the ordinary way, a pound of the finest beef, which at present costs ninepence, and is scarcely ever so cheap as sixpence. The reason for the cheapness of Mr. Gillon's meat-juice is, that the residual meat is economised, while that of the ordinary cooking process is good for nothing.

It is a much more convenient article for use than any of the extracts made from meat by extemporary processes in the kitchen, or by certain very dubious chemical methods lately come into vogue. It differs materially from all meat extracts prepared by boiling.—*London Monthly Journal of Medicine.—Med. Examiner.*

Case of Gastrotomy for the Removal of a Leaden Bar.—Recovery. By T. B. Neal, M. D., *of Columbus City, Iowa.*

The subject of this notice, L. Bates, æt. 27, resides at Wapello, twelve miles from this city. During the three days preceding Christmas last, he had been drinking freely of common whiskey; and on that day, while intoxicated, attempted, on a wager, to swallow a bar of lead. The bar was 10 inches long, ½ by ¾ inches thick, and weighed one pound.

Thrusting it far down the œsophagus, it slipped from his grasp, and immediately entered his stomach. Dr. Bell was sent for at once, but as Bates had formerly been a juggler, the Doctor, thinking that he was at some of his tricks, refused to go. Bates, not much concerned at the non-attendance of the physician, worked for three days after the accident, in a pork-house, with but little inconvenience. During the night of the third day, however, he was seized with great pain in the stomach, accompanied with shooting pains along the spine, extending from the lumbar region to the sacrum, and thence to the hips. The next day he walked to Columbus, a distance of six miles, and sent for Dr. Robertson, the oldest physician in the county, to attend upon him. Dr. R. requested me to see the case with him. We found him, on the fourth day, comparatively easy. His tongue was white, breath very foul, and bowels constipated. Upon careful examination, the œsophagus was found perfectly free and unobstructed. We administered to him morphia in small doses, and attempted to act upon his bowels and neutralize the poisonous effects of the lead by large doses of sulphate of magnesia. Under this treatment, although the bowels were but slightly disturbed, he was

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rendered astonishingly comfortable, and could walk about a little. On the 3d of January, the 10th day after his accident, the severe gastric pain again returned, accompanied with vomiting, and other symptoms of gastritis.

The operation of gastrotomy was now resolved upon. Dr. Bell, of Wapello, performed the operation by making an incision through the walls of the abdomen, from the umbilicus to the false ribs, four inches in length and two inches to the left of the median line. The peritoneum being divided, Dr. Bell introduced his hand, and pushing back the protruding intestines, found that the bar of lead was nearly perpendicular, the upper end inclining a little to the left. The bar was pushed up, until the lower end came opposite the abdominal opening. It was then seized, and an incision made in the walls of the stomach, just large enough to admit of its extraction by means of forceps. The contraction of the muscular coat of the stomach caused the incision in the organ to close perfectly and without trouble. The external wound was stitched, and a compress applied.

The operation was performed between three and four o'clock, P. M.; the day was cloudy, and towards sunset grew quite cold. The patient was entirely under the influence of chloroform until about two minutes before the last stitch was taken, when he revived somewhat, and expressed himself as feeling better than he had done before. When the chloroform was first administered to him, he vomited freely, hence, when the opening was made into the stomach nothing escaped therefrom, that viscus containing nothing but the leaden bar.

For the ensuing three days the system of the patient was kept under the influence of opium, and nothing but mucilaginous drinks, in small quantities, allowed as diet. He recovered as well as a patient does of uncomplicated gastritis.

I give you below the condensed notes of the progress of the case, taken by Drs. Bell, Robertson, and myself.

January 4th, 10 A. M.—Patient tolerably quiet; pulse 85, and moderately full; some fever and thirst; vomited once, and bowels moved freely during the night, though he has been taking small doses of morphia every two hours; complains of pain in the stomach and bowels; continued the morphia, and ordered two tablespoonfuls of toast and water every two hours.

3 P. M.—Patient still quiet; pulse 85, and rather hard. Took ℥x. blood from the arm. Continued morphia and toast-water.

January 5th, 10 A. M.—Rested well last night; bowels undisturbed for eight hours, then at 4 A. M., watery dejections; complains of nausea; pulse 83, and soft; tongue white; no

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soreness in the gastric region; some cough; ordered the following pill every two hours and a half:—

℞. Hydrarg. Chlorid. mit. gr. ss.
Pulv. Ipecacuanha gr. j.
Morphiæ Sulphat. gr. ¼.
M. ft. pil. i.

5 P. M.—Complains of heart-burn, nausea, thirst, and frequent alvine evacuations; pulse 73, strong and full; craves acid drinks. Prescribed a weak solution of citric acid; it did not appear to agree with the stomach; at 9 o'clock slight vomiting: therefore directed morphia, gr. ss., ipecac. pulv. gr. ii. At 11½ o'clock, administered morphia, gr. ss. In half an hour patient fell into an easy sleep, his pulse growing softer. Directed gum-water and ice-water, a table spoonful alternately every half hour, and the morphia every two and a half hours.

January 14th.—Met patient standing in the door; appetite good; pulse 70, and soft; wound looks well; dressed it, and ordered one blue pill, to be followed by enema if it failed to operate.

On the 16th the wound was nearly healed, and he had walked half a mile to see a neighbor. At the time of writing this hasty epistle, (Feb. 19th,) he has been out of the settlement some two weeks, and I learn has been at work. What his exact condition is at present, I do not know, not having seen him since he began to go abroad.

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Note.—There must be very few cases of this operation on record, as we have succeeded in finding but one, which is described in Chelius' System of Surgery, in a note by Mr. South: "Barnes," he says, "quotes from Becker the case of a young peasant, who on 29th May, 1635, whilst endeavoring to produce vomiting with the handle of a knife, let it slip from his fingers and pass into the stomach. He was much frightened, but able to go about his usual occupation. It was, however, determined to remove the knife by operation, which was done on the 9th of July following, by a surgeon and lithotomist, named Shoval. 'A straight incision was made in the left *hypochondrium*, two fingers' breadth under the false ribs; first through the skin and cellular membrane, then through the muscles and *peritoneum*. The stomach subsided and slipped from the fingers, which prevented it from being immediately seized; but it was at length caught hold of with a curved needle, and drawn out of the wound. A small incision was then made into it upon the knife, which was then easily extracted. The stomach immediately collapsed. After the external wound had been properly cleansed, it was united with

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five sutures, and tepid balsam poured into the interstices. Tents impregnated with the same balsam, and a cataplasm of bolar earth, the white of egg and alum, were then applied.' (P. 324.) Two sutures were removed next day, on the following day two more, but the fifth is not noticed. On the fourteenth day after the operation the wound had healed. Dr. Oliver saw this knife at Königsberg in 1685, and says it was six inches and a half long. The patient completely recovered."

This is the only instance of Gastrotomy proper we have been able to find recorded. The rarity of the operation is no doubt owing to the fact that most substances capable of entering the stomach, pass eventually, even though quite bulky, into the intestine; in which case Enterotomy may be required for their extraction. Of this latter operation, for the relief either of intestinal obstructions or the removal of foreign bodies in the bowels, numerous cases are on record. Mr. Benj. Phillips, in an excellent monograph, published in the 31st volume of the Royal Medico Chirurgical Transactions, relates twenty-seven cases of intestinal obstruction, for which operations were performed; thirteen of these were successful, though many of them were at the cost of establishing an artificial anus. An interesting case is related by Dr. White, of New York, in the New York Medical Repository, vol. x. 1807, where a silver spoon, swallowed by a patient while delirious, was removed from the ileum.—EDITOR.—*Medical Examiner.*

Lupulin as an Anaphrodisiac.—Lupulin, or the active principle of hops, is possessed of powerful sedative effects on the generative functions. This was first entertained by Debout, but more recently Zambaco has published a paper on its anaphrodisiac virtues (*Bull. de Therap.* 30th August, 1854), in which he more than confirms this author's observations. Zambaco administered the medicine in doses varying from 1 to 16 grammes, and he never found sickness or constitutional disturbance attend its use. He has recorded the history of eight cases of painful erections, following gonorrhœa, in which it was most successfully employed as a sedative. He affirms that in four-fifths of the cases it allays the morbid erethism, and prevents chordee. It answers this purpose much better than camphor, which often irritates the digestive functions, and fails to produce the desired effect. Besides being possessed of sedative and anti-blenorrhagic properties, which depend on its essential oil and resinous principle, lupulin contains a bitter element which acts as an admirable tonic. Zambaco has seen lupulin given, *as a tonic*, to strumous patients, with the best

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effects, the appetite becoming improved, and the digestive organs strengthened.—*Edin. Monthly Journal of Medicine.*

The administration of lupulin as an anaphrodisiac, was proposed by Dr. Wm. Byrd Page, of this city, in the year 1849. In his remarks upon it, he states that he had successfully used it as a remedy to prevent nocturnal erections, more than two years previous to the publication of his article. See Medical Examiner, Vol. V., May, page 284.—*Editor Med. Exam.*

Diuretics and their Uses.—Dr. Baines read a paper on this subject. After some introductory remarks, he divided diuretics into two classes—the direct and the indirect. The direct were considered as local stimulants to the kidneys, their active principles being conveyed by the capillary circulation to the glands, and thereby exciting them to increased action. Some direct diuretics excite the same action by being excreted entirely by the kidneys, as is the case with nitrate of potassa, which salt is always found to be thrown out of the system in the same proportion as it has been administered. Other salts of this class, however, experience some change and re-arrangement of elements, and are presented to the kidneys in different states of those in which they were administered. Thus the acetates of the alkalies invariably become converted into carbonates, and in this latter state of chemical combination produce their stimulating effects upon, and are exercised by, the renal organs. Analogous facts were mentioned as occurring during the administration of mercury, when the bile has been found to contain traces of the mineral; and also that ether and alcohol are found in the brain, an organ upon which their specific effects are produced. In the case of indirect diuretics, however, the case is different, their effects being caused through the system generally, rather than by any positive action on the glands in question. Some of these produce diuresis secondarily, the primary effect being manifested on the absorbent system generally, whereby the blood becomes charged with water, and the kidneys then are called upon to excrete it from the body. Mercury and iodine were adduced as examples of this class. Other indirect diuretics act primarily on the stomach, and secondarily on the kidneys, this end being accomplished either by lessening arterial action, and thereby promoting absorption, or by increasing the quality of the blood, and so causing the kidneys to share in the general improvement of the body. Examples of this kind of action were seen in the effects of digitalis, and in the preparations of iron. The beneficial effects of digitalis in cases of dropsy were then discussed, as

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was the necessity of relieving the portal system, in cases where the liver and its veins are gorged and congested, before we could hope to rouse the renal glands to increased action. Colchicum, mercury, taraxacum were instanced as examples of diuretics acting indirectly by relieving the portal congestion if present. The circumstances modifying the action of these remedies were stated to be—

1. The state of the skin, a profuse perspiration preventing the establishment of a full diuresis.

2. Active catharsis suspends the operation of the kidneys, by diverting the fluid of the system from the kidneys to the intestinal glands; a good instance of the kind being seen in asiatic cholera, where the kidneys do not and cannot act, simply because all the fluid of the body is evacuated by the stomach and the bowels.

3. No obstruction must exist in the course of the intestinal canal to prevent the flow of the medicine swallowed, as shown by Dr. Barlow.

4. If there be extensive disorganization of the kidney, the due secretion of urine cannot take place.

5. If the anasarca or ascites be very extensive, the pressure consequent upon it acting on the veins and lymphatics prevents the absorption of the remedies or of the fluid to be evacuated—in these cases tapping or puncturation of the limbs must first be resorted to, and then by removing the pressure alluded to, allow the removal of the dropsy by diuretics.

The subject of the dilution of the saline diuretics was then alluded to, and as their absorption was considered to depend upon the ordinary principles of endosmose and exosmose, the opinion that, to be absorbed and so act as diuretics, these remedies must be so far diluted as to be below the specific gravity of the serum of the blood was upheld; otherwise, in place of a diuretic action, a purgative effect would be produced. The effects of acetate and bitartate of potassa were instanced as bearing out this view. Blood depuration by the kidneys, was then considered, and viewed as possible in some cases. The various cases in which the blood in disease is, by means of the kidneys, thus depurated, were then mentioned. Thus in jaundice, where the flow of bile or its secretion is interfered with, the urine is often found charged with it, and by means of this secretion it is removed from the system. Again, in cases of portal congestion, the urine is often found loaded with purpurine; and, in extensive pulmonary disease, Dr. Hassal has detected indigo in the urine, both of which compounds are highly rich in carbon. In health, the solid contents can scarcely be increased by the administration of diuretics, their effects being confined to the increase of the water only of the urine.

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Thus, if nitrate of potassa is given in a healthy state of the system, we shall find that in the urine secreted the amount of solids excreted only exceeds that under other circumstances by the amount of the salt exhibited, the whole of which passes out of the system by this secretion. This result, too, would be expected, when we remember that in health the two processes of repair and waste go on "*pari passu*" in direct relation to the wants of the system; hence we cannot expect to do more than increase the fluids, without affecting the amount of the solids of the urine. But in disease where the whole animal economy is involved and suffering from the various faulty assimilations in perverted nutrition, it is possible that some of the morbid elements may be removed by the action of diuretics, as we know the poison of lead is eliminated by the kidneys by the action of iodide of potassium. The diseases most likely to be benefited are gout, rheumatism, scrofula, and some perhaps all, kinds of fever. In confirmation of this view, the treatment of rheumatism by acetate of potassa and nitrate of potassa, and the general good results obtained by the administration of the former salt in cases of ague, as reported by Dr. Golding Bird, was adduced. In the latter case, the quantity of solids excreted fluctuated with the occurrence or non-occurrence of the ague fits. The salts most likely to produce this effect in the system are those which are known to exert chemical changes in albumen and albuminous tissues.—*London Lancet.*

Successful Treatment of Acute Rheumatism by the Acetate of Potash. By Golding Bird, M. D.

In the last number of the Journal we alluded to Dr. Bird's interesting remarks on renal depurants; and here we have merely to present our readers with the same author's experience with regard to the treatment of acute rheumatism by *one* of that class of remedies, namely, the acetate of potash. On this point, Dr. Bird uses very strong language, affirming, that he has never seen the disease in question yield with so much facility to any other remedy. In the several cases in hospital practice under his own care, Dr. Bird has seen the cure to be more rapid, and the immediate relief to the patient more marked, by the use of acetate of potash in quantities of half an ounce administered, largely diluted, in divided doses in twenty-one hours, than by any other treatment. In three days he has frequently found the exquisite pain of the joints nearly absent, the patient comparatively comfortable, and able to bear with greater ease the helpless state in which the still swollen joints

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placed him. In no case have any bad consequences succeeded the employment of the remedy, while complete recovery has been more expeditious, and the ill effects of colchicum and mercury have been avoided. The most interesting and no less important fact has been noted by Dr. Bird in his experiments with this salt, namely, that the pain of the disease remarkably declines so soon as the urine becomes alkaline and rises in specific gravity; and he further records his impression, that the tendency to affections of the heart is very much lessened after the alkalinity of the urine has been established.

Dr. Bird's experience of the efficacy of the acetate of potash in the treatment of acute rheumatism has been derived from a large number of cases. The only adjuvants he has employed have been a mercurial laxative, if constipation existed, and a full dose of Dover's powder on the first day or two of treatment, if the pains be severe, the joints being wrapped in sheets of wadding—a plan the author has followed since he experienced in his own person the comfort it affords.—*Urinary Depositions.*—[*From Blister and Critic.*

Normal and Diseased relations of Skin and Mucous Membrane.
By Alfred Hitchcock, M. D., *of Fitchburg, Mass.*

In the following paper an attempt is made to show the anatomical identity of the skin and mucous membrane; and also to trace the pathological analogy observed in these textures, and therefrom to deduce therapeutical principles.

The subject naturally divides itself into the *Anatomy, Pathology and Therapeutics.*

I. *The Anatomy.*—The skin is a very complex texture. Three principal layers form its structure—the Epidermis, the Papillæ, and the Cutis vera.

The Epidermic layer, which was formerly called an inorganic, concrete exudation from the cutis vera, is now proved by the microscope to consist of epithelial cells of a definite form and vital character. Next beneath is the layer of papillæ, which consist of minute conical or cylindric elevations, which are more prominent on the palms of the hands and soles of the feet than in other parts; these elevations are highly endowed with blood-vessels and nerves, and are the medium of the sense of touch. Below this lies the cutis vera, a dense, tough, highly elastic structure, composed of fasciculi of fibro-cellular tissue interwoven in all directions and forming by their interlacements numerous spaces or areolar. Besides these, anatomists speak of the retemucosum lying next below the epider-

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mis and giving color to the skin ; this, however, is proved by the microscope to consist of the last deposited layer of epitheliel cells. Beneath the cutis vera also is found a layer of adipose tissue in which lodge the sudoriferous glands, whose open ducts penetrate all the layers and appear on the surface. These *sweat glands* are most numerous in the palms of the hands and soles of the feet, and are demonstrated to number from four hundred to three thousand on a square inch on different parts of the body. The sebaceous glands, secreting an unctuous semi-concrete fluid, are very abundant in all parts of the body, excepting the palms of the hands and soles of the feet. They are observed to be most numerous in the axilla and scalp and around those parts where the mucous and cutaneous membranes coalesce. The hair follicles penetrate all the layers of the skin, their origin being in the fatty tissue beneath the custis vera. All the hair follicles, the sudoriferous and sebaceous gland ducts that have so many countless outlets on the skin, are all lined with epithelial cells or rather a thin reflection of the epidermis. The skin carries on the double function of excretion and absorption, and the importance of these functions to a healthy state of the animal economy can scarcely be too highly estimated.

The mucous membranes line all those passages by which internal parts communicate with the exterior, and by which either matters are eliminated *from* the body or foreign substances are taken *into* it. They are soft, moist, velvety and extremely vascular. The external or free surface is every where lined with one or more layers of epithelial cells rendering it quite like the epidermis. Beneath this lies a basement membrane of firm texture and somewhat corresponding in structure to the cutis vera—next is a stratum of vascular tissue with outgrowths and depressions in the form of papillæ and villi, some of which form glands. In different parts of various tracts of mucous membrane certain structural peculiarities are observed which adapt each part to its peculiar function. The numerous gland ducts which open on the mucous membranes are all lined with an epithelial membrane.

This is the general anatomical arrangement. In addition it should be stated that many of the different forms of epithelial cells have cillia or fine pellucid processes on their free extremities which are constantly in rapid vibratory motion. These cilliary processes have an important influence in the function of secretion and propulsion of fluids in the various membranes and ducts. In the pulmonary and uterine mucous membranes especially, the cilliary processes of the epithelial cells are very conspicuous and act an important part in the functions of these organs. The mucous membranes are everywhere abundantly

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supplied with glands—many of them quite corresponding to the sudoriferous and sebaceous glands of the skin in structure—and like them moistening and lubricating the surfaces on which they open. The specific function of the mucous glands is not quite so clearly understood as the corresponding glands on the skin. In the alimentary canal, they unquestionably play an important part in the function of digestion. In the small intestines numerous villi exist which play an important part in the absorption of chyle.

The mucous membranes universally, like the skin, perform the double function of absorbing and exhaling certain fluids—and this function is in addition to the various special functions performed by different sections or parts of each of these tissues. In this common function of absorption and exhalation they come under the domain of organic life—and in their common sensibility and impressibility to temperature and the physical properties of matter applied to their surfaces, they are alike related to animal life, and they consequently are both abundantly supplied with nervous influence from the sympathetic and cerebro-spinal systems.

The parallelism of function in these two membranes is very striking, consequently the sympathies between these two orders of tegumentary tissue is very strong and active. A little more fully it may be stated that from the skin carbonic acid and nitrogen are exhaled as they are from the mucous membranes, and both discharge vapor or sweat charged with salts and effete animal matter.

The sebaceous glands find a counterpart in the follicular glands of the mucous membranes. Gaseous and fluid matters find entrance into the general system through the skin with a slower but with as certain a process of absorption as they do through the mucous membranes. It is also proved that nearly every article of the materia medica which is absorbed from the surface of mucous membranes may also with great certainty find entrance through the skin by absorption, and thus exert their distinctive and specific effects on the various organs of the body.

II. *Pathology.*—The anatomical identity and reciprocal influence of the skin and mucous membrane constitutes a most important consideration in the pathology of cutaneous diseases. Eruptive diseases of various kinds are often the result of crude and irritating ingesta and those which are acute are almost invariably preceded by derangement of the mucous membrane of the alimentary canal, and especially of the throat and stomach. On the other hand any extensive inflammation of the skin whether from a burn or a contagious exanthem is quite likely to be accompanied or followed by mucous irritation or

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inflammation. If the cutaneous inflammation is pustular or eliminates a morbid secretion the danger of the supervention of mucous disease is greatly increased.

It is found to be a physiological law of the cutaneous and mucous membranes, that if either is physiologically excited, the function of the other is proportionately diminished; and if either is pathologically excited, the other takes on identically the same morbid action. In this connexion it may be stated, what was long ago demonstrated by Dr. James Johnson, editor of the London Medico Chirurgical Review, that the healthy functions of the skin and liver are always *consentaneous*, and never vicarious. In other words, when the state of the skin was genial and healthy and its function easily performed then the function of the liver was in a correspondingly healthy state, and *vice versa*.

In studying cutaneous diseases, we find that many causes act directly on the skin—as climate and seasons, temperature, all poisons, friction, artificial heat, uncleanly habits, &c.,—and many of these casual eruptions are well known secondarily or sympathetically to be transmitted to the mucous membranes: in precisely the same way we find diseased action in these membranes from causes directly applied to their surface, producing sympathetically or secondarily cutaneous eruptions, as for example, *roseola, urticaria* and *strophulus* from noxious ingesta. Many cutaneous affections are hereditary and then the play of sympathy between these two membranes is very marked, and the strife for the domicil of the disease is often quite eccentric.

Syphilitic eruptions, leprosy and cutaneous tubercles are remarkable forms of disease dependent on depravation of the blood and general constitutional deterioration, and are almost always strongly marked by corresponding morbid action in the mucous membranes.

Nearly all the exanthemata attack both the cutaneous and mucous membranes. Urticaria, Measles, Scarlatina and Variola, are notable examples. In most of this class of diseases the cuticle desquamates, and the mucous membrane in the affected parts casts off its epithelium in like manner.

Erythema is also a disease quite as distinctly recognized on the mucous as the cutaneous surface. Genuine erysipelas in its full development *is not* as distinctly visible on mucous membrane, for the reason that there is no tissue corresponding in character and quantity to the sub-cutaneous cellular tissue which is well known to be the favorite location of that disease.

Some of the bullæ have been observed on the mucous membranes as well as on the skin; and diphtheritic inflammation

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has been shown to occur on the skin as well as the mucous membrane. Membraneous croup and membraneous dysentery are the two most notable examples of this disease, and both have been shown to be in some degree contagious. It is also asserted by some pathologists that contagious or hospital gangrene throws out a diphtheritic membrane identical in character to those of the two contagious diseases just named. It has often been observed in fevers of bad type that the skin will throw out the same kind of false membrane, especially if the surface has been abraded by a blister or other external irritant. This tendency has been thought in some degree to mark the virulence of the disease.

There is a form of diphtheritic inflammation of the mucous membrane which is frequently observed in this vicinity, especially towards the end of summer and in autumn. It is sometimes preceded by slight dysenteric symptoms, mild fever, and great vital prostration. The fauces and mouth are at first of a violet or scarlet red, soon becoming spotted and at length entirely covered with a white pultaceous exudation which sometimes exfoliates and is several times reproduced. There is feeble capillary action—with tendency to coldness of the parts most remote from the heart; and it is common to observe transient red spots on the face, neck, and sometimes the extremities—and in severe cases these spots are livid—and almost always there is a general exfoliation of cuticle as the patient recovers. Sometimes there is violent delirium but more frequently the cerebral functions only partake of the *general* torpor and prostration. Sometimes sweating occurs, but more commonly the skin is parched and dry. The pulse is usually soft and never so quick as in true typhoid fever—even though there is the same apparent degree of vital prostration.

This diphtheritic disease seems occasionally to be epidemic and contagious, affecting whole families and neighborhoods; and the duration of the disease may be one week or one month, according to treatment or accidental influences. This disease is very often mistaken for "*follicular enterite*" or true typhoid fever. It is a very great error in pathology to confound the two forms of disease and in a statistical point of view cannot but be very unfortunate to the cause of medical science. The two forms of disease undoubtedly are occasionally combined in the same individual, and yet it seems very important that their distinctive pathology should be duly estimated.

This diphtheritic disease is here alluded to in order to call attention to its *cutaneo-mucous pathology*—and not to give a detailed account of its history and character—that being of itself well worthy of a distinct and lengthy paper. The eruptions

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and gangrenous patches of the skin in *typhoid* and *typhus* fevers are well known to be clearly assimilated to the follicular eruptions and scarlet and gangrenous patches that occur in the course of the intestinal canal in those diseases.

Psoriasis of the mucous membranes, exactly like the same disease on the skin, has been abundantly shown to exist in some large institutions where microscopic investigations have been adopted as a means of diagnosis. The eye alone can discover it at the outlets of mucous canals—and the shreds which escape from the bowels exhibit precisely the same microscopic appearance as the cutaneous elimination. These subjects invariably show loss of nutrition, are pale and nervous, and present many anomalous symptoms. There is great debility, but they are not usually benefitted by tonics. It is highly probable that other varieties of squamous disease may likewise be proved to exist on the mucous membranes. These several forms of cutaneous disease already enumerated and proved to exist on the mucous membranes, are sufficient to establish a general pathological law; and analogy would lead us to infer that many others, if not all the different varieties of eruptive diseases have the same tendency to development more or less perfect in the mucous membranes. Many pathologists are of opinion that nearly all cutaneous diseases are more or less contagious—and that they are strictly parasitic—having an independent animalcular or cell vitality—and finding an appropriate *nidus* in the skin and mucous membranes—and possessing a power of existence and reproduction limited only by exhausting their proper *pabulum*. Variola, varicella and rubeola soon exhaust the pabulum and cease spontaneously, rendering the patient invulnerable to another attack, or, in other words, leaving the soil unfitted for another crop.

Some cutaneous diseases seem never to exhaust the soil, and with age become more tenacious of the domicil, and consequently require the application of a poison to destroy their vitality; hence, the use of mercury, arsenic, sulphur, tar, iodine and antimony with success in many forms of cutaneous disease.

III. *The Therapeutics.*—On this subject, usually so prolific of good advice and complicated prescriptions—a few general principles only will be briefly alluded to.

It will be well for the practitioner to enquire—

1st. Is the disease dependent on some cause that will cease spontaneously, or that can very easily be avoided?

2d. Is the disease of specific origin and self-limited, and will it result in a natural cure?

3d. Is the disease contagious, with unlimited tendency to

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increase and consequently requiring the local application of a poison for its removal?

4th. Is the disease hereditary or vicarious and would it be safe to suppress it?

5th. Is a due estimate placed on the danger of increasing the same morbid action in the mucous membrane by the internal use of drugs for curing the cutaneous disease?

6th. Is the remedy safe and will it best promote the permanent welfare of the patient?

The general principles implied in a correct answer to the foregoing queries are quite sufficient to guide the physician to a safe and judicious practice in the treatment of cutaneous diseases.

The important pathological law stated in a former part of this paper, viz: that in a state of physiological excitement or increased natural function of the skin or mucous membrane the other is correspondingly diminished in function—Whereas, *when either is pathologically excited* the other *is sure to take on the same kind of morbid action.* This principle is fundamental and should never be lost sight of in prescribing for cutaneous diseases. This principle, rightly understood, would not diminish confidence in the use of medicines, but would lead to a more careful investigation of the pathology of cutaneo-mucous diseases, and consequently to a more judicious, safe and successful application of remedies.

[*New Hampshire Journal of Medicine.*

Eighth Annual Meeting of the American Medical Association.—This body met on Tuesday, May 1, at Musical Fund Hall, in Philadelphia. During Monday, a large number of delegates arrived, and there was a full attendance at the hall on Tuesday, A. M. The hall had been fitted up for the convention. In the lower room of the building was placed a finely executed stone intended for the Washington monument. The stone bears the following inscription:

INSTITUTED

MDCCCXLVII.

Vincit Amor Patriæ.

On the face of the stone was cut, in alto relievo, a most beautiful representation of Hippocrates refusing a bride tendered him by Artaxerxes, the King of Persia. The stone is four feet by two, and twenty inches in thickness.

At an early hour, a large number of the delegates presented their credentials in the lower room, and their names were

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duly registered. A committee continued to sit there for the reception of delegates from abroad.

The following officers of the association appeared in their seats:

President—Dr. CHAS. A. POPE, of St. Louis.

Secretaries—Dr. FRANCIS WEST, of Philadelphia, and Dr. E. S. LEMOINE, of St. Louis.

The association was not called to order until half past eleven o'clock.

The President invited all ex-Presidents and ex-Vice-Presidents to take seats on the platform.

The first business in order was the report of the committee of arrangement

Dr. ISAAC HAYS, of Philadelphia, chairman of the committee of arrangements, said that on behalf of the profession of Philadelphia, he would extend a cordial greeting to the members of the association. It gave them the highest pleasure to have the association among them. The committee had made the best arrangements in their power, to render the sojourn of the delegates agreeable. While this was felt as a duty, it was also a gratification. Eight years have elapsed since this association was first organized in Philadelphia. In every city in which the annual meetings of the society have been held, our delegates have been treated with an elegant hospitality which we cannot pretend to rival. But it was hoped the efforts of the committee would render agreeable the stay of the assembled wisdom of the noblest of professions. Dr. Hays then stated that 337 delegates had registered their names. By general consent the usual calling over of this long list of names would be dispensed with, and the association proceed to the next order of business, which was the calling of the roll.

Dr. WEST then called the roll.

The address of the President, Dr. CHARLES A. POPE, of Missouri, was delivered after the calling of the roll. We give it in full.

GENTLEMEN—With feelings of grateful pleasure, I meet you, and greet you, on this occasion.

For high and useful purposes have we assembled from the wide extent of our beloved country. The elevation of a noble profession—the promotion of science—the good of humanity—these have been, are, and will continue to be the objects of our association. Whether we have, thus far, done much or little, our sole aim has been the advancement of the best interests of our fellow-men. I shall not assert that we have done as much as we might have done, or that the course hitherto pursued by us is so perfect as to admit of no improvement. Were such the fact, and were the association a firmly

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established institution, I might have experienced more hesitation in the selection of a theme for the present occasion. And since we cannot, as yet, I think, urge such a claim, the few suggestions which I shall offer, are made with becoming diffidence, but at the same time with a deep sense of their importance to the welfare and perpetuity of our association.

Some strictures on our proceedings, in medical and other journals, have appeared within the last year, as well as in previous years. I shall not here blame the authors of them. They are, doubtless, as proud of our noble profession as we, and equally with us, anxious for the advancement of its interests and its honor. I thank them for their suggestions. All of us are ready to hear them and to profit by them. If any more effectual mode of arriving at truth can be devised than that which we have heretofore pursued, all of us are ready to follow it, and would rather thank than quarrel with those who propose it.

Physicians have an almost superhuman mission to fulfil. The goal of their ambition, and their hopes, and their duty, stands at the *ultima thule* of human capacity—nay, rather beyond it. It cannot, indeed, be said that their duties are beyond their powers, but their ambition, their hopes, their wishes certainly are. They would gladly know, not only all the secrets of organization, but those also of Pathology and Therapeutics. To arrive at such knowledge is, perhaps, beyond the attainment of the human mind. Multiform are the elements which enter into the problem of health and disease. Health is, itself, a constant change of composition—diseases are ever varying changes, supervening on this.

Do we know, with all our advancement, and after all the toil of our predecessors for two thousand years, the exact changes in which any disease, the fevers, for instance, consist? And even when we shall have learned these, so as to understand them as well as the most ordinary chemical changes, the ever-varying character of most diseases, and the inward disturbing influences upon them of the mental and moral emotions, would require to follow them, a continued stretch and power of intellect, of which it is doubtful if man be capable. This exactness of knowledge is not, I grant, necessary to the very successful practice of medicine. Our profession can render great and important services to man without it, but with it, it would be still more serviceable. To it our ambition tends. To this perfect knowledge we aspire. Although we may never reach, we can yet eternally approach it. In the vast region of our researches, there is no probability that human genius will ever, Alexander-like, weep for the want of unconquered provinces. Beyond the conquests of the future

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heroes of the profession, there will always be a boundless field for the ambitious and philanthropic explorer. In the language of a western student, "the science of Medicine, like the liver of Prometheus, is sufficient to glut the eagles of all time."

The object of this association is to do something to advance the profession toward the far-distant goal of perfection—to aid the solution of some of the problems and enigmas of life and organization—to add some material to the growing temple, whose foundations were so firmly laid by the Coan sage, and to do its part, asbest it may, in the cause of humanity. Nor do I think that, so far, it has altogether failed. Many valuable contributions to science have been elicited—professional ambition has been stimulated—an *esprit-du-corps* has been successfully evoked and established. The strength of the profession has acquired additional power by the union of its members. This association has been to physicians what the railroad and electric wires are to commerce, and the interchange of useful knowledge to states and nations. It has made us one, and, as I have just remarked, in unity there is power.

This association has stimulated thought. Chaotic and void would forever remain the masses of facts, accumulated by the observations of ages, but for the coördinating and logical power of reason. It sits in judgment on the silent phenomena, as a "refiner of fire, and a purifier of silver." It forces the voiceless facts to mount the tripod of the oracle, and speak forth words of wisdom. The scalpel, the crucible, the microscope, may be subsidiary to its purposes and ends, but they cannot supply its place. Fixed and patient thought, in medicine, as in the other departments of science, is the Aladdin's lamp that lights the footsteps of the discoverer. To stimulate attention and thought, is to accelerate many a new discovery—to hasten the advent and establishment of important principles yet in the womb of the future. May not our association do this more effectually than it has hitherto done?

Let all the contributions be read and attentively considered. Such a course would certainly be more encouraging, as well as more respectful, to their authors. Let the reports be deliberately and fully discussed, and let them go forth to the world with the sanction of the criticisms of the association. This would require time, it is true, but if we have time to meet at all, surely a few days would make but little difference. The good that would be effected would yield a ten-fold compensation for the time employed. Every one must admit that three or four days is too short a time for the association readily to fulfil its annual mission.

I would, moreover, respectfully suggest, that time be taken for the discussion of some of the leading topics of medical phi-

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losophy. Among these, may be mentioned the nature, causes and t eatment of cholera, yellow fever, et cetera—Hygiene, and the laws of health affecting masses of men—Quarantine—the causes of mortality among children—the chemical and vital doctrines of life. Questions like these, indicated a year in advance for discussion, would excite a carefulness of investigation, and a degree of attention and thought which could not fail to clear away much of the darkness and doubt in which they are yet shrouded. Nothing so sharpens the intellectual powers as public debate. It fixes attention, and strains to the utmost every faculty. I have no hesitation in saying that facts enough have been accumulated to establish great and general principles, of which the medical world is yet in ignorance or doubt. Nothing would contribute more to demonstrate these principles than the collision of matured intellects in public debate. What a mass of facts, and arguments, and demonstration, would be brought to bear, on any of the subjects alluded to, if some of the best minds in the profession were to debate them, after a year's preparation! Observed facts are the crude materials of science—the intellect is the master builder of its august temple.

I make these considerations for your consideration. All the scientific meetings in this country and in Europe, employ more time than ours has hitherto employed. Evidently we must protract our sessions, if we would render them as serviceable to science as they may be. No member of the association will be required to remain longer than suits his wishes or convenience. Some fifty or sixty, more or less, would always be found to listen with eagerness to scientific papers, and engage with pleasure in scientific discussions.

The time has probably arrived for a change in our plan of organization, which will admit of the selection of a permanent place for the future meetings of the association. There are evident advantages incident to both the migratory and stationary plans. These might, perhaps, be easily reconciled and secured. A proposition, if I mistake not, was made some years ago, by the Smithsonian Institution, and I would respectfully suggest, whether it would not be in accordance with the best interests of the association, to hold biennial meetings in Washington, and the alternate ones, as now, at different points of our common country. We might thus secure all the advantages of a fixed abode, in the way of preserving the archives, making collections, etc., whilst by meeting in various localities, we could not fail to excite that wide-spread interest among the profession, and obtain such accessions of new members as would greatly enhance the high and useful objects of ur a;; ociation. Should this proposal meet with your appro-

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bation, I would further intimate, that policy would, perhaps, require the meetings of the association at the National Capital, to be held in the years of the short sessions of Congress.

I shall say but little of the legislative duties of the association. I shall say nothing of the propriety or impropriety of getting laws passed to regulate the practice of medicine, and furnish standards for candidates for the doctorate. Perhaps the association can do but little in this respect. Ours is a popular government, and the people are disposed to allow the largest freedom in everything pertaining to medicine, medical schools and physicians. Laws passed against quackery one year are revoked the next. Our country is the paradise of quacks. All good things have their attendant evils, and this unbridled liberty is one of the evils of a popular government. May we not hope, however, that even this evil may disappear, as general education and the cultivation of the masses advance? At any rate, the people are not yet disposed to put down the quacks, nor to require too high a degree of qualification for those of the regular profession. After all, laws can make only mediocre physicians. They can require the candidates to know only so much—to be qualified to a certain degree; and this degree will always be far lower than that to which the true lovers of knowledge would attain, without any legislation on the subject. The greater lights of the profession cannot be manufactured after any process of legislative enactment. Thirst of knowledge, self-love, philanthropy, burning ambition—these make the great physician and surgeon. These have made all the worthies of the past—not legislation. Legislation cannot drive the drone to the proud heights of professional eminence. When these heights are reached, it will be seen that the successful aspirant has been stimulated by a stronger power.

To him the laurel-blossoms of renown and the life-giving mission of his art, are dearer and more attractive than was the mystic bough of the sibyl to the eager Æneasor; than the golden apples, guarded by sleepless dragons, to the Hesperian daughters.

Whatever course you may think proper to pursue, I am sure that your objects will be, the advancement of science—the good of mankind—the honor and glory of the profession. We have the dignity and character of a noble calling to sustain—of a profession which has numbered, for two thousand years or more, some of the wisest and best of men in all countries and all times. It is no trivial matter, to sustain the rank and respectability of a vocation which can boast of a Hippocrates—a Harvey—a Hunter—of the most erudite and beneficent of

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sages and philanthropists the world ever saw—of a profession which has furnished to every nation is *clarum et venerabile nomen.*

On the eve of the battle of the pyramids, Napoleon exclaimed—"Soldiers! from the height of yon monuments, forty centuries look down upon you." Gentlemen, from the heights of past ages, countless worthies of our God-like profession point and beckon to a goal more elevated than that which attracts legislators and conquerors, Solons and Cæsars.

On motion of Dr. J. Biddle, the thanks of the association were tendered to the President, Dr. Pope, for the able and eloquent address just delivered.

Dr. Hays then announced the various excursions planned by the committee of arrangements for the pleasure of the association.

Dr. Condie introduced a resolution on the subject of permanent membership, which was discussed, and an amendment offered by Dr. Watson, of New York. The whole subject was, on motion of Dr. White, of Buffalo, referred to a committee of three. The chairman appointed Drs. White, of Buffalo, Watson, of New York, and Condie, of Philadelphia, such committee.

A recess was then held, during which each state appointed a member of the nominating committee.

On the resumption of business, invitations from Detroit, Nashville, and Chicago, were presented, asking the association to meet in these localities next year.

A report was received through Dr. LaRoche, from the committee on prizes. The report stated that the committee had received six essays in competition for the prize offered by the association. But, although these essays evinced much ability and extensive learning, but one was decided to possess those qualities which deserved the award of the prize. The essay was entitled "Statistics of Placenta Prævia." The name of the author was announced as Dr. James D. Trask, of White Plains, New York. (Applause.)

On motion, the report was accepted and the prize essay was referred to the committee on publication.

The committee on epidemics of Missouri, Iowa, Illinois, and Wisconsin, submitted a voluminous report, the abstract of which occupied a long time in reading.

On motion, the report was referred to the committee on publication.

Dr. Sanford B. Hunt, of Buffalo, New York, from the committee on the hydrometrical state of the atmosphere in various localities, and its influence on health, submitted a report,

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pending the reading of which the hour of adjournment arrived, and the association adjourned to meet Wednesday morning at nine o'clock.

After the adjournment a large number of the members visited the Pennsylvania Hospital for the Insane.

SECOND DAY.

The association reassembled on Wednesday morning at nine o'clock.

Dr. J. Atlee, of Lancaster, addressed the convention on the subject of the stone made for the Washington National Monument, by A. J. Beck, a skillful American artist.

A resolution was adopted that no member be allowed to speak unless his name and residence be announced.

The committee on nominations, reported the following nominations:

President—George B. Wood, Penn.

Vice-Presidents—Wm. M. ——, Ala.: Daniel Tilden, Ohio; D. Humphrey Storer, Mass.; Grafton Tyler, D. C.

Secretaries—Francis West, Penn.; R. C. Foster, Tenn.

Treasurer—Casper Wistar, Penn.

Committee on Publication—Francis G. Smith, Penn.

The President elect, on taking the chair, said that he felt deeply sensible of the honor conferred upon him, and though he had all his life devoted himself to the cause in which we are all engaged, yet he is unaccustomed to preside, and any errors which he may make, he hoped the association would excuse. He assured the convention that he would do his best to justify his appointment as presiding officer.

The committee further reported on the subject of the next place of meeting, and recommended Nashville, Tenn.

A motion was made to substitute District of Columbia, in place of Nashville. Laid on the table.

Dr. A. B. Palmer, of Michigan, moved to substitute Detroit, Michigan, in place of Nashville.

The question was now taken, on the motion of Dr. Palmer, and it was adopted. Detroit, therefore, is the next place of meeting. The result was unanimously approved by rounds of applause.

Dr. R. C. Foster, appointed secretary, tendered his resignation, which was accepted.

Dr. Brodie, of Michigan, was appointed to fill the vacancy.

Dr. Sanford B. Hunt resumed the reading of his report on the hygrometrical state of the atmosphere in various localities. Pending the reading of the account, a motion was made and adopted, "that the desultory conversation of members be dispensed with." The report abounds with interesting facts on the subject of epidemical diseases, during the summer of 1854.

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It was accepted, and referred to the committee on publication.

A resolution was adopted, providing that a committee be appointed to confer with the directors of the several railroad and steamboat companies, with the view of having commutation tickets issued to the delegates to the convention, to be held at Detroit next year.

Dr. Frank H. Hamilton, of Buffalo, N. Y., then submitted a report on "Deformities after Fractures." The report was not complete, the author having only considered fractures of the ossa nasi, septum nasi, superior maxilla, inferior maxilla and clavicle. Copious statistics accompanied each fracture.

Dr. Hamilton said he had a word to say which did not belong to the report. Prosecutions for malpractice have become so frequent that surgeons were alarmed, and not a few were abandoning the profession, or refusing altogether to undertake the treatment of grave surgical accidents, and especially of fractures. So frequent were these prosecutions that members were no longer surprised at such statements. If they had heard the speaker say that lawyers were abandoning their profession from this cause, they would have been startled, but to us the fact is familiar.

It is proper for us, then, to interrogate ourselves. Why is it that we are held to an accountability so much more strict than any other professional men, or than any other artizans? Is it because there are jealous and designing men in our own ranks who instigate these suits? No doubt such men may be found, but only as an exception. The fact is that surgeons have sometimes been mulcted in damages simply because the jury believed, from the united character of the medical testimony, that it was a conspiracy, and the more conclusive the testimony, the more certain, with some jurors, is the defendant to suffer.

Is it chargeable to the members of another profession—to the lawyers? There may be some men in the profession of law, also, who, driven by the sheer necessity of their circumstances—by their extreme poverty, or who, without any such apology, with only loose notions of right and wrong, encourage and undertake such suits—such are the men who hang about the Tombs in New York, and who may be found, more or less, in every town—but the speaker has reason to believe that honorable and intelligent lawyers seldom countenance these prosecutions. That eminent jurist of the state of New York, Joshua Spencer, has told Dr. Hamilton, that for himself he does not think he ever commenced a suit of this character, although he has been frequently retained as counsel, and he believes his brethren, generally, look upon these complaints with suspicion and refuse to meddle with them.

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Where, then, must we look for an answer to the question, Why are these prosecutions against surgeons so frequent? Let the gentlemen be assured, the causes are to be found in the *very imperfections of our art, and in our own unwillingness to admit these imperfections.* Surgeons have claimed too much, and it cannot certainly be expected that the world will demand of them less than they claim for themselves. Again and again surgeons have said that a fracture of the femur might be generally made to unite without any shortening, while the fact is not so. Malgaigne, who is eminently an honest man, says, to make this bone unite in an adult person, where the fracture is sufficiently oblique to prevent the ends from supporting each other, is "simply impossible" (*simplement impossible.*)

Let the profession be wiser in future and acknowledge that they cannot perform impossibilities.

Dr. Charles Hooker, of New Haven, read a report upon the "Diet for the Sick." The document lays down certain laws for the government of diet in the various diseases "flesh is heir to," and specific articles that may be given to patients. Referred to the committee on publication.

A resolution expressing the thanks of the association to the ex-President and other officers, for the ability with which they have discharged their duties, was adopted.

At this period the association adjourned to proceed to Independence Hall. On arriving at this place, the delegates were introduced to Mayor Conrad, by Dr. Isaac Hays, chairman of the committee of arrangements.

Dr. Hays briefly addressed his Honor the Mayor, giving an outline of the history of the association, and alluding to the patriotism of the profession as exemplified in Rush, Warren, and others, closed as follows:

But I may assure you that the spirit which animated our ancestors, if it appear dormant, is not extinct in our bosoms, and that while standing on this spot—the shrine sacred to Human Liberty,—we experience feelings akin to those which the inspired Law-giver must have felt when he heard the voice calling to him out of the midst of the burning bush—"Put off thy shoes from off thy feet, for the place whereon thou standest is holy ground." (Loud Applause.)

The truly eloquent reply of Mayor Conrad will well repay perusal.

REPLY OF MAYOR CONRAD.

Mr. Chairman of the Committee of Arrangement, I thank you in the name of the community which I have the honor to represent, for your eloquent introduction of our friends to the authorities of the city, and to this, the Hall of Independence.

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Gentlemen of the American Medical Association, I am proud of the privilege of extending to you, in the name of the government, and of the people of Philadelphia, a most cordial welcome. (Applause.)

I bid you welcome to our city—a city which, deriving a cherished distinction from the profession which you adorn, is eager, now and ever, to requite it in her tribute of respect for its professors. I welcome you to our people, whose intercourse, for many a year, with you or your brethren, has inspired a feeling which, reserved as we are sometimes said to be, will, doubt not, burst into earnest and unambiguous expression, before you leave us. (Applause.)

I welcome you, gentlemen, to this Hall, but not as strangers, or the sons of strangers—for it is your own. As the temple and territory of Delphos, in the wildest domestic perturbations of Greece, afforded one sacred area over which the cloud of discord never gathered, one altar whose worship was never invaded, this spot, consecrated to our common American glory, knows no lines of latitude, and belongs, in truth, no more to us, whose peculiar privilege it is to inherit its guardianship, than to our brothers—*to you*. In coming hither, therefore, you *come home*. (Applause.) These precincts have been hallowed, for all time, by the heroic virtues of your and our fathers. This is the fountain from which the living waters of American liberty were first drawn, and it is, therefore, most sacred—(woe to the generation in which it ceases to be sacred!)—but, like the well of the Patriarch, all the tribes of Liberty's Israel own here an equal right, and owe here an equal homage. (Great applause.)

In no sense, then, can I greet you as strangers, for yours are names familiar to every American proud of the science of his country, and those who are united, by this association, in a cause so lofty as that eloquently characterized by your chairman, may not only claim the universal and acknowledged privileges of the republic of minds, but the rights of a nearer and dearer charter, the brotherhood of beneficence—the kindred claims of noble hearts, knit in the highest and holiest of human aspirations. In this spirit, with the most fervent and fraternal sentiments of respect and regard, I greet and welcome you.

You are right, Mr. Chairman, in claiming, amid the associations which hallow these precincts, a peculiar privilege for your profession—a profession which not only sprinkled, with the first blood of the revolution, the highest altar upon which valor vowed and dedicated our country to freedom—I refer, as you have referred, to Dr. Warren and Bunker Hill—but which, in every struggle for the enlargement and enl-

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ment of human destinies, has been eminently distinguished for courage, zeal and fidelity to the rights of man. You have, therefore, a peculiar right to claim kindred here, and have that claim allowed; and within these walls which witnessed the zeal of Rush, it would be treason to virtue to forget that one of the lights of your profession shed glory upon the solemn debates of this hall, and was foremost among those that bade yonder bell, (preserved and devoted to the veneration of posterity,) with its iron tongue to "*proclaim liberty throughout all the land to all the inhabitants thereof.*" (Continued applause.)

It is the glorious peculiarity of your profession that, while ambition, in its ordinary and most applauded paths, plays the part of *the Destroyer*, and wins glory at the expense of human life and happiness, you and yours, with a more exalted civilization and a nobler heroism, have ever *sought to save*. Next to the highest of all human courage—if, indeed, it be merely *human*—that of the martyrs of religious truth, the courage of the physician, whether on the battle-field or in the lazar-house, the courage of science and humanity, is the most sublime, and best entitled to the *clarum et venerabile nomen*. The vulgar courage of the warrior, under the base stimulus of passion or the low greet of applause, can hardly be compared to the noble intrepidity of the surgeon, who gleans, in the ruthless and red-handed reaper's path, the leavings of battle; and still less with the hero of the hospital, who encounters the grim antagonists in the horrid silence and gloom of the pestilence. Imagination can hardly embody an instance of human courage and virtue more sublime and unearthly than that of the physician, who in the midnight of a plague-stricken city, midst the fœtid solitudes of its alleys, and entering the devoted hovel of the wretched, ministers—while only pestilence, and misery, and death, and God look on, to the perishing. I need not step from this spot to grasp the hand of many a hero who claims no laurel—many a noble philanthropist whose sacred labors in scenes like these, have been unmarked, save by the eye that never slumbers, and remembered only by Him, who alone can reward.

To such a profession, one venerable from its antiquity, noble from the grandeur of its objects, illustrious from its achievements, and which demands every aid and energy of genius and science, of head and heart that dignifies the race, it is not strange that, go where it may, a ready homage greets and a ready blessing attends it. In our own city, all that is noble in patriotism, all that is exalted in science, all that is bright and beautiful in the arts that refine society, all that is lovely and cherished and holy in private life, combine to render the profession sacred and dear to us.

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There are few living to whom some one death in the past is not the sole event and solitary memory of the survivor's life—to him a lonely pyramid in the melancholy desert; and to such a mind and memory, the debt of the death-bed, where science, rendered holy by its office, ministered, though never paid is never repudiated. I never knew a good man, still less a good woman, who had not such a debt—a debt which bankrupt gratitude cherished with its holiest affections and devoutest memories.

In these times, when the omnipotence of associated effort is invoked for so much that is of dubious merit, it is a gratifying spectacle to behold the enlightened professors of the most exalted of all arts—men sage and grave, unselfish and unaspiring forsaking the homes to which they are bound by the affections and the afflictions of thousands, by wealth and fame and influence, to wander wearily away upon a pilgrimage of hundreds of leagues, in the cause and interests of the human family, its security, its health and happiness. For more than ten years, the representatives of your profession have gathered in convention. What other body of our citizens have made a like effort—a like sacrifice? Selected from the most eminent of the profession, the delegates have been men whose years, like their virtues, were many. How difficult must have been to them the effort to burst through the bonds of a relying and clinging practice! How great the labor and how heavy the sacrifice! They have already visited in this duty, the cities of every section of our wide country. How many have fallen by the wayside? How many martyrs could you not thus number in this cause? How many of the good and great of the profession have, in these benevolent pilgrimages, joined the ranks of the thousands who have sacrificed themselves, at the requisitions of duty, as recognized and enforced by your self-imposed laws—joining the dead in the effort to aid the living. The epitaph of the Spartans at Thermopylæ, might well commemorate the virtues and the fate of these martyrs. But if the cost has been great, the results have been commensurate.

Of the professional advantages attained, though I know them to be invaluable, I will not presume to speak; but I may be permitted to state, as health is the most important subject of municipal provision and care, that the transactions of the association, which I have examined with great interest, comprise much that merits the attention, and will reward the respectful consideration of the municipal government of the Union.

It is natural that Philadelphia should feel, as she does feel, a profound interest in the cause of medical education in this country. She cannot, of course, forget that it was here that

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the first medical college was established in this country; that its merits and success extorted a reluctant trans-atlantic tribute of admiration, and that progressing rapidly, but wisely, it a hieved and maintained an equality with the most celebrated institutions of the old world. As the cause of medical education has expanded, and institutions worthy of the cause and country have sprung up, each triumph, thus attained has been regarded here as the successful outbursting of an offshoot from the primary effort; and Philadelphia, while rejoicing in the expansion and elevation of medical education throughout the land, has almost fancied—so earnest is her interest in medical education—that she had a right to indulge a parental pride in all that advances that interest.

These genial feelings have been maintained, in all their early and fervid freshness, by constant intercourse with all sections of our country. The ingenuous and gallant youths that have come hither for medical instruction have, in their unstudied intercourse, exhibited the character of their respective states in a light so generous and exalted as to win our affections not only for themselves, but for the communities and states which could exult in them as their own. Winter after winter, we have had hundreds of these noble young spirits among us here. And let me remark, that rigorous as I am said to be in the administration of the law, I have yet to know the first occasion to rebuke, much less to punish a medical student. We have found them as gentle and decorous in their deportment as they are exalted in their aspirations; and had Philadelphia—eminently catholic in her affections for her sister communities—needed a lesson of love and loyalty, these young missionaries would have taught it. This interchange of sympathies has endured for the third of a century, (may it last forever!) Her youths who formerly bore those sentiments to the remote sections of our republic, stand before me now as the revered sages and ornaments of their profession, meeting here the evidences of a reputation which had preceded them, and has long been cherished by us. And who can tell what has been the results of this kindly interchange of kindly feeling? It has doubtless been felt in every community, social, and political relation of life, correcting the prejudices, harmonizing the discords, and subduing the dangers of our common country.

We realize these facts. We recognize in the members of an enlightened profession like yours, so many patriots and philanthropists engaged in the great and general interests of the human race, and, apart from the more scientific acquisitions of your annual meetings, we perceive, in them, results auspicious to all that we cherish, all that is kindly, forbearing

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and conservative between man and man, party and party, state and state, section and section; and so regarding them we hail and greet you with a welcome as sincere and cordial as the heart can forge or the tongue can utter. (Loud applause.)

On reässembling at the Musical Fund Hall—

On motion, the thanks of the association were tendered to Mayor Conrad, for the very cordial manner in which he had received the delegates in Independence Hall, and that a copy of his speech be printed in connection with the proceedings of this association.

Dr. Thompson, of Delaware, offered a preamble and resolutions providing for the appointment of a committee from each state to report on medical topography and epidemics. Ordered to lie over till next day.

Dr. Isaac Wood, the Treasurer, made a report, from which it appears that during the year the sum of $3216 30½ was received, of which there is a balance remaining amounting to $1115 26.

Dr. Watson offered a resolution appropriating the sum of $1000 to defray the expenses of the committee to have prepared the stone for the National Monument. Adopted.

Dr. Mauran called up a preamble and resolution expressive of thanks to those United States Senators who so earnestly and ably advocated the passage of the bill relative to sickness on shipboard, as suggested by this association.

The resolution was adopted, and copies ordered to be sent to the Senators.

Dr. Francis West, Secretary, read a paper from Dr. William H. Byford, of Evansville, Ind., on the "Pathology and Treatment of Scrofula," which, on motion, was referred to the committee on publication.

Dr. N. S. Davis, of Chicago, Ills., submitted a report on the nutritive qualities of milk, and the influence produced thereon by pregnancy and menstruations, in the human female, and pregnancy in the cow; and also on the question whether there is not some mode by which the primitive constituents of milk can be preserved in their purity and sweetness, and furnished to the inhabitants of cities in such quantities as to supersede the present defective and often unwholesome modes of supply.

The report was referred to the committee on publication.

At 4 o'clock, the delegates, accompanied by many ladies, visited Girard College.

THIRD DAY.—MORNING SESSION.

The chair was taken by the President, Dr. Wood, who called the Association to order.

The Secretary, Dr. West, read the minutes of yesterday's meeting, which were approved.

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Dr. Isaac Hays, from the Committee of Arrangements, announced that 520 delegates were now enrolled.

A letter was read from Dr. Reyburn, of Missouri, suggesting that the large district in Missouri be divided into two parts. The district is seven hundred miles north and south, and four hundred miles east and west. The duties in so large a district as this, cannot be easily fulfilled by one chairman. By dividing the district, the reports will be more satisfactory than at the present time. The Doctor tendered his resignation.

Dr. Watson moved the acceptance of the resignation, and the reference of the other portion of the communication to the committee on nominations—which was afterwards withdrawn.

Dr. Askew renewed the motion, and it was adopted.

A letter was read from Dr. E. B Haskins, of Clarksville, Tenn., chairman of the committee on Microscopical Investigations of Malignant Tumors, asking to be excused from making a report, inasmuch as he had not the necessary apparatus for ascertaining the facts incident to the subject.

The request of the gentleman was granted.

A report was received from the committee on publications, adverse to the publication in the *Transactions* of the reports of special committees. Referred to a special committee of five.

Dr. Frank H. Hamilton, of Buffalo, New York, made some additional remarks on the subject of fractured clavicle. The Doctor expressed an earnest hope that the Managers of the Pennsylvania Hospital would be more exact in making up their reports of the statistics of fractured clavicle, so that we may all be able to judge of the merit of the instrument, which has been used in such cases in that institution, for thirty years. He had known a surgeon to be mulcted in heavy damages for using that instrument in a case of fractured clavicle, because he could not accomplish all that he supposed he could by using it. He did not wish to speak harshly, but at the same time he called again upon the managers of that institution to be more exact in their statistics on the subject of fractured clavicle, so that the medical faculty may be prevented being a grand Insurance Company for the whole world.

Dr. Thompson, of Delaware, called up his resolutions, offered yesterday, in reference to the appointment of committees on the Medical Topography of the country.

Dr. Askew, of Delaware, offered as an appendage to the resolutions of Dr. Thompson, the following:

Resolved, That all reports on the Medical Topography and prevailing diseases of States, shall, to entitle them to be received by this Association and published in the proceedings, be first approved by the medical societies of the State or Ter-

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ritory where such societies exist, and to which State or Territory such report refers.

Dr. Palmer, of Michigan, advocated the resolutions, and said that, while he was conscious of the difficulties in the way, he thought that great good would result from the appointment of the committees.

Dr. J. G. Orton, of Binghampton, N. Y., offered the following resolutions:—

Resolved, That each County Medical Society (or in parts of the country where such have not been established, any duly organized Medical Association) be requested to amend its constitution by attaching thereunto the following article: "It shall be the duty of each member of this society to keep a faithful record of the diseases which may fall under his observation during each month, according to the classification adopted by the American Medical Association in May, 1847, stating the age and sex, occupation and nativity of the patient, the average duration of the disease, and finally their recovery or death, and to report the same *in* writing to the secretary, on or before the first day of February of each year, who shall transmit a digest thereof to the State Medical Society, and also to the appropriate committee appointed by the American Medical Association for its reception."

Resolved, That each incorporated Hospital, Infirmary and Asylum, be invited to furnish a copy of their annual reports for the use of the committee of their respective States.

Resolved, That the State committee appointed by this Association to report on the prevailing diseases of their respective localities, shall receive and arrange a digest of the reports transmitted to them by the secretaries of the various county societies, and to report the same at the annual meeting of this Association.

Resolved, That the 1st day of January be the time fixed at which the object of these resolutions shall be carried into effect, and that the several county societies and associations, be requested to amend their constitutions as heretofore recommended, at as early a date as practicable, and to report to the State committee their willingness or unwillingness to acquiesce in the request of this Association.

On motion, the resolutions were referred to the Committee on Nominations.

Dr. Thompson, of Delaware, expressed a hope that the committee would go into immediate session, so that a report might be made as soon as possible.

Letters from Drs. Sutton and Benner, on the subject of epidemics, were referred to the Committee on Nominations.

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Dr. Condie, of this city, submitted a voluminous report upon the subject of Tubercular Disease, accompanied by a vast array of facts, the gathering of about three years. He stated that the report would make at least 500 printed pages. The opinions advanced, he said, were "very heterodox."

On motion, Dr. Condie was permitted to publish the report in any manner he pleased, without reference to any obligations he may feel due to the association.

Dr. Brainard, from the Special Committee "On the Constitutional and Local Treatment of Carcinoma," was continued another year.

Dr. Horace Green, from the Special Committee "On the Use and Effects of Applications of Nitrate of Silver to the Throat, either in Local or General Disease," was also continued another year.

A member from the Committe on Dysentery submitted a lengthy report upon the nature and treatment of that disease. Referred to the Committee on Publications.

AFTERNOON SESSION.

The Association assembled at 1 o'clock.

Dr. Mussey, of Ohio, read an interesting report upon the Use of Alcohol in Health and Disease. It abounded in facts illustrating the effects of alcohol upon the human system, and evinced extensive reading, and a laborious collation of medical testimony. Referred to the Committee on Publications.

Dr Hays presented an invitation to the Association to visit the Pennsylvania Institution for Idiotic and Feeble-Minded Children, this afternoon. Coaches will be provided to take the members to Germantown.

The Committee on Nominations, to which was referred so much of the President's address as relates to the next place of meeting, recommended that no change be made in the place of holding the next annual meeting—which will, consequently, be held at Detroit.

A letter was read from Dr. R. J. Breckenridge, of Ky., chairman of Committee on Medical Literature, announcing that his report was ready, but that he was not able to present it himself, and asking its reference to the Committee on Publications.

Dr. Condie moved, that when received, the report be so referred.

A communication was read from Dr. W. H. Anderson, of Mobile, chairman of Committee on Medical Education, setting forth that his duties requiring an extensive foreign nnd domestic correspondence, his report was incomplete, but would be ready in season for publication in the *Transactions.*

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A motion was made that the report, when received, be referred to the Committee on Publication.

Dr. Davis, of Illinois, hoped that the paper would not be referred without first being read. He was opposed to the principle of referring papers to the Committee on Publications, until the Association had had an opportunity of judging of their merits.

A resolution in regard to the registry of births and deaths was referred to the Nominating Committee.

On motion, the Association adjourned, it being 3 o'clock, P. M.

At 4 o'clock, the members of the Association entered coaches and proceeded to the City Hospital, Blockley. They were received by the President of the Board of Guardians, Mr. F. M. Adams, and the Chief Resident Physician, Dr. A. B. Campbell, and conducted through the Hospital, and the Almshouse. In the evening, the members of the Association were received at the residences of Drs. Samuel Jackson, J. Pancoast, Henry Hartshorne, and Mr. Isaac Lea.

FOURTH DAY.—MORNING SESSION.

The Association assembled at nine o'clock, pursuant to adjournment, Dr. Wood in the chair.

The Secretary read the minutes of yesterday's meeting, which were approved.

Dr. Hays stated that the whole number of names registered now, amounted to 523.

Dr. Hayward offered a resolution expressing the thanks of the Association to all who had, by attention and munificent hospitality, contributed to the enjoyment of the delegation. Unanimously adopted.

Dr. N. S. Davis, of Illinois, moved the following preamble and resolutions, which were referred to the Committee of Arrangements, with instructions to report on the same at the commencement of the next annual meeting:—

Whereas, The present mode of conducting the annual meetings of the Association affords but little opportunity for the discussion of strictly scientific questions and papers, and *whereas*, this has been regarded as a serious defect in the operation of our organization, impairing its scientific character; therefore,

Resolved, That the daily sessions of the Association during each annual meeting be divided into two parts, the first to terminate at an hour not later than 12½ o'clock, P. M., of each day, and to be devoted, as heretofore, to the general business of the Association. The second part, consisting of all the time which it is deemed advisable to remain in session each day, after 12½ o'clock, P. M., to take the character of a scientific

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section, and to be devoted exclusively to the discussion of questions relating to the science and art of medicine.

Resolved, That the Association, in its capacity of a *Scientific Section*, having no power to act on any subject of a *scientific* character, may continue in session, whenever thought desirable, a longer period than in its more general capacity.

Dr. Semmes, of Washington City, D. C., Dr. Hyle, of Wilmington, Delaware, and Dr. Condie, of Philadelphia, were appointed.

Dr. J. L. Atlee offered the following resolutions, which were intended to counteract a recent recommendation of the Legislature of Michigan:—

Resolved, That to secure efficient teaching in medical schools, where a prime object is to enforce practical precepts, a large degree of union and harmony must exist among the teachers, and confidence be reposed in them on the part of their pupils.

Resolved, That any such unnatural union as the mingling of an exclusive system, such as Homœopathy, with Scientific Medicine, in a school, setting aside all questions of its untruthfulness, cannot fail, by the destruction of union and confidence, and the production of confusion and disorder, unsettling and distracting the minds of the learners, to so far impair the usefulness of teaching, as to render any school adopting such a policy unworthy the support of the profession.

Dr. A. B. Palmer, of the University of Michigan, in seconding the resolutions, desired permission to offer a few remarks. After briefly stating some of the peculiar features of the incorporation of the University, he went on to say that the institution is under the management of a Board of Regents elected by the people, by whom the professors in the various departments of science and art are appointed. The *Legislature* has *nothing to do* with the appointment of professors. During the session of the Legislature the past winter, the admirers of homœopathy had made special effort, and had succeeded in obtaining a *recommendatory* action on their part, in reference to the establishment of a chair of homœopathy in the University. It had been represented to them, that a large part of the people of Michigan favored that peculiar mode of practice, and that it was but fair that its principles be inculcated in the State University.

The spirit of this recommendation is, and has been resisted, both by the Regents, and by the faculty and students of the medical department of the University.

Dr. Palmer wanted an expression of opinion by the Association on this matter. Legislatures should know that Homœopathy and Scientific Medicine should not, and cannot be united in one school—they are incompatible, and neither he o

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any of his colleagues could, or would continue in any school where such an absurdity was attempted.

Some of the medical journals have given an erroneous impression in regard to this action of the Legislature. The faculty are going to act energetically in this matter, and they ask the Association to co-operate with them in instituting a thorough and systematic inquiry, both in this country and in Europe, into the pretensions and practice of this delusion and imposture, that the minds of the people may be enlightened on the subject. As the friends of homœopathy in Michigan have raised the issue, the faculty of the University wish to meet it. Circulars of inquiry will soon be sent out, and the faculty hope that they will be promptly responded to.

The doctor repeated the assurance that on no account would the faculty tolerate a chair of homœopathy in the University, but that, to a man, they would resign their positions rather than submit to so absurd and humiliating an appointment.

The doctor's remarks were received with evident satisfaction by the members, as was shown by the frequent rounds of applause that greeted him.

Dr. Clendenin, of Ohio, offered the following:—

Resolved, That no State or local society shall be hereafter entitled to representation in this Association that has not adopted its Code of Ethics.

Resolved, That no State or local society that has intentionally violated, or discarded any article or clause in the Code of Ethics, shall longer be entitled to representation in this body.

A motion to lay the above on the table was lost.

Dr. Miltenberger, of Baltimore, offered an amendment, which was amended by Dr. J. L Atlee to read as follows:—

Whereas, It has been brought before the notice of the American Medical Association that the State Medical Society of Ohio has violated, at their last meeting, Sec. 4th, Art. 1st, Chapter 2d, of its Code of Ethics; therefore, be it

Resolved, That the Secretary of the Association be directed to inform the officers of that society that, unless such action be rescinded, they cannot be hereafter represented in this Association.

These were added to the resolutions of Dr. Clendenin, and adopted unanimously; the delegates from the society in question being forward in support of them.

Dr. Alfred Stillé offered the following resolutions:—

Resolved, That a special committee of five be appointed to report at the next meeting of the Association on the following question: Might not the present system of repeating the same lectures to the same classes, during two successive terms, be usefully modified by extending the lectures of each chair

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over two sessions, so as to embrace a systematic and complete discussion of each of the following subjects:

1. Special, Regional, and General Anatomy, including illustrative references to Morbid Anatomy.
2. Inorganic, Organic, and Pharmaceutical Chemistry, and Toxicology.
3. General and Human Physiology; Hygiene; Medical Jurisprudence.
4. Medical Botany; Materia Medica; General Therapeutics.
5. General Pathology; Morbid Anatomy (Systematic); Practice of Medicine.
6. General Surgical Pathology, or Institutes of Surgery; Mechanical, Operative, and Medicinal Surgery.
7. Obstetrics; Diseases of Women; Diseases of Children.
8. Hospital Clinical Medicine and Surgery.

Resolved, That the committee, at an early day, address the several Medical Colleges, in regard to the proposed plan of instruction, requesting from them an official expression of opinion upon its merits and feasibility.

The chair appointed the following gentlemen as the committee, to whom the subject is referred:—

Dr. Alfred Stillé, of Philadelphia, chairman, Prof. Samuel Jackson, Philadelphia, Dr. John Bell, Philadelphia, Dr. John Watson, New York, Dr. J. L. Cabell, Charlottsville, Va.

Dr. Corson, of New York, read a volunteer report on the Influence of Lead on the Heart, which was referred to a special committee of three for examination.

The hour of recess now arrived, and a motion prevailed to dispense with the recess, and remain in session until final adjournment.

Dr. Thomas, of Baltimore, explained a simple method of preparing nitrate of silver for inhalation in diseases of the throat and chest. The apparatus was placed on the table, and, when put in motion, the nitrate of silver was thrown off in an impalpable powder. The subject was referred to a special committee of three.

For want of space we have omitted the names of delegates, and most of the special and standing committees, besides other interesting details.

The above report is condensed from the New Jersey Medical Reporter and the Buffalo Medical Journal.

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On the Use of Glycerine as an Internal Remedy. By J. L. Crawcour, M. D., *of New Orleans.*

I wish to draw attention, particularly at present, to the *special* action of glycerine on the economy, and the perfect safety with which it can be used as an internal remedy. For the past twelve months I have used it in every case of disease where formerly I should have used cod liver oil, and with superior benefit; for while it seems to possess all the remedial virtues of this latter agent, it is its superior in taste, in not disordering the digestion, and in its property of combining with any other remedy.

In several cases of phthisis, of scrofulous disease generally, in mesenteric disease in children, I have used it largely and successfully; and in children, its sweet and agreeable taste gives it a great advantage over cod liver oil, the only agent I can compare it with, in its therapeutic action. In addition to its special anti-strumous property, I find that it materially aids in the assimilation of salts of iron, especially of the iodide, and I now rarely order either iodine, or the iodide of iron, without combining them with glycerine. Quinine also, is soluble in it, without the aid of sulphuric acid, and to some slight extent is divested of its bitterness.

The dose in which I usually administer it is from one to three drachms three times daily, in an ounce of water; in from one to two drachms, it, in a short period, relieves the cough, improves the digestive powers, and appears to increase the fat-producing principle in phthisical patients; in larger doses it has in a few instances produced nausea; it is, however, essentially necessary to its successful employment that it be obtained pure, and this is a matter of some difficulty, for it is ordinarily the result of the preparation of the common lead plaster, and consequently contains traces of lead, but by the process of Dr. Morfit, who decomposes lard, or oil, with hydrate of lime, it can be procured chemically pure, and at a very cheap rate. Should my communication induce other physicians to try it, the purpose of my writing to you will be answered, as it will be an equal boon to the physician and patient, if a remedy can be discovered equal in properties to cod liver oil and without its nauseous taste and smell.

I have recently tried it as a solvent for phosphorus, which latter we have hitherto hardly been able to use in medicine, as its solution in oil is so nauseous that we can rarely induce patients to swallow it, and its solution in either is so dangerous that I question whether any physician of ordinary prudence would prescribe it. But in glycerine, it is not only nearly as

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soluble as in oil, but is miscible with water in all proportions, and is comparatively tasteless and odorless. About two grains dissolve readily in an ounce of boiling glycerine, and from experiments on myself, I consider it a powerful and a valuable stimulant. Of the above solution, which, after the nomenclature of Messrs. Cap and Garot, I would call the glycerole of phosphorus, I took one drachm in a wine-glassful of water, with which it intimately blended; there was hardly any taste or smell, and it did not produce those garlicky eructations said to be the result of the phosphorus in oil. Its effect on my system was that of a stimulant: in about half an hour the pulse became quickened, both at the wrist and at the temples, the cheeks flushed, the skin became warm and suffused with moisture, there was a certain amount of mental excitement, and after a short time there occurred a feeling of oppression at the præcordia, accompanied by palpitation of the heart, while after a certain time the cerebral excitement was followed by a slight feeling of confusion, accompanied by sleeplessness. Each time that it has been taken in this dose, it has, on myself, produced these same effects. I therefore look upon this quantity as excessive, and would suggest that if this remedy be used, it should be in doses ranging from ten to thirty minims. It may be combined with any other drug, and I look upon it as a valuable addition to our list of therapeutic agents; not that the use of phosphorus is new, but hitherto it has been excluded from us from the difficulty of finding a proper solvent—this now, I believe, has been discovered in glycerine.

[*New Orleans Med. News and Hospital Gaz.*

Iodide of Potassium with Ammonia.—The Southern Journal of Medicine states on the authority of the Medical Times, that an opinion prevails at Guy's Hospital, that the efficiency of the iodide of potassium is very much increased by combining with it the carbonate of ammonia. The proportions we usually observe prescribed are, two or three grains of the iodide with four to five of the ammonia. Dr. Gull, who strongly advocates the combination, explains to his class that he believes the ammonia to act in three ways: 1st. As a gentle stimulus to the stomach, preventing the iodide from disagreeing. 2d. As a diaphoretic, diffusing the blood, and with it the remedy, well through the whole system. 3d. By chemical decomposition, itself being changed into nitric acid, and then by combination with the base of the salt, liberating the iodine in its free form.

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PART IV.

EDITORIAL.

HEALTH OF ST. LOUIS.

During a residence of fourteen years in St. Louis we have never known the health of the city so good as it has been this spring, and up to the present time. During the month of May, and the greater part of June, the weather was remarkably cool and pleasant, and our weekly bills of mortality ranged from sixty-seven to ninety-three, which for a mixed population, of one hundred and twenty thousand, such as we have, exhibits a degree of health unsurpassed by any city in the United States. For one or two weeks in the early part of spring the cholera prevailed to a limited extent among our foreign population, and recently arrived strangers, but it has almost entirely disappeared and with it all sources of disease.

No city in the country has heretofore suffered in its reputation for health so much, and so unjustly as St. Louis, and notwithstanding we have often demonstrated this by facts, and figures, yet the public abroad are slow to believe that such is really the case. We repeat it, therefore, that with the single exception of the frequent occurrence of cholera among us, there is no cause, local or otherwise, why St. Louis should be more unhealthy than any other large city, *nor indeed is it.* Even in reference to our infantile mortality—which has erroneously been supposed to be unusually great, it will be found, that the per centage of deaths among children here is less than in Philadelphia. Yet, in spite of this false and injurious reputation, our city has steadily continued to increase with unparalleled rapidity, both in commerce and population, and every where in our streets and avenues may be seen scores and hundreds of robust and healthy children.

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THE NASHVILLE JOURNAL.

The editor of the Nashville Journal, in his last issue, has devoted no less than thirteen articles under his editorial head to our special benefit, but they are all utterly contemptible, both in matter and style, and do not require one word of reply from us.

STATE MEDICAL ASSOCIATION.—CIRCULAR.

The following circular addressed to the physicians of Missouri, has been issued by the committee appointed for that purpose, and extensively circulated. We sincerely hope that the members of the profession throughout the State will give earnest heed to this appeal and at once take efficient steps to carry out its suggestions. It is high time that we should awake to the importance of this subject, if we would not fall ingloriously behind the profession in other parts of the country.

LEXINGTON, JUNE 1, 1855.

Dear Sir :—The "Medical Association of the State of Missouri," at its last session, held in Lexington, in April, 1855, in view of the great want of interest felt by the physicians throughout the State, respecting the affairs of the Association, charged us with the duty of calling your attention, and that of the profession, particularly to this matter.

Pursuant to a call made upon them, the physicians from various parts of Missouri met, in general convention, in St. Louis, in November, 1850, and organized the "Medical Association of the State of Missouri." This Association, as the parent Society, contemplated a complete and perfect organization of the medical profession throughout the State, by the formation of Town, County and District Societies, to be represented at each of its annual meetings. The Association met at Boonville the following year, and has regularly, since that time, held its sessions in St. Louis, until the present year, when it convened in Lexington.

That the lively interest in the Association at first manifested by the profession has greatly declined, is evinced not merely by the limited number in attendance upon its late sessions, but also by the failure of nearly all the standing committees to report on medical subjects assigned them. On this account, therefore, the Association has felt the necessity of speaking directly to the profession, to arouse, if possible, the physicians

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of Missouri to a more decided and active interest in a subject so intimately connected with the advancement of medicine.

Missouri is behind her sister States in every thing that pertains to medical organization. Not more than half a dozen local or county societies exist at the present time; and while every one complains of the want of efficient organizations, yet nearly all manifest on this subject that singular apathy that is, and ever has been, the real cause of the evil.

Did our limits permit, we could furnish you with many facts in reference to the zeal and industry of physicians, not only in the older, but also in many of the younger States; and as to the highly beneficial results flowing from their thorough organization. Such things should not excite our envy, but should arouse an earnest spirit of emulation.

Apart from the advantages resulting from an efficient organization of the profession, in procuring, by concert of action, any needful legislation which shall protect physicians in their rights, no medical man can be insensible to the benefits that medical science would derive from a plan of united effort that shall embrace every portion of the State.

The subject of the registration of Births, Marriages, and Deaths, so fraught with interest to every one, but of incalculable importance to the physician, is one that should be incessantly urged upon the attention of our State Legislature; and physicians must make the move in this matter, for no State has ever done any thing on this subject, except at the importunate solicitation of the medical profession. And it is quite obvious that organization is the preliminary step to our acting as a body in any affair of importance.

At present, the accumulated experience of the physicians of Missouri, not only in ordinary diseases, but also in those that are peculiar to our region, is allowed to moulder away without benefiting a professional brother, and thus our knowledge, almost without exception, perishes with the possessor. Missouri presents a field peculiarly suited to observing the morbid effects of malaria, and her physicians, while there remains a single point that is obscure in human knowledge in reference to this mysterious agent, that interferes so fearfully with human health, should regard themselves as the special sentinels to watch and *report* the assaults of this enemy of our race.

Epidemics, too, occasionally sweep over our State, spreading devastation far and wide, and yet, no one chronicles the event. Each practitioner must content himself with the few facts, that, in his limited sphere, fall under his own observation. These things are not as they should be.

Let us, therefore, urge upon you the importance of organizing, forthwith, a County Medical Society, auxiliary to the State

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Association. Exert your influence with your professional brethren to effect this object, and endeavor to send delegates regularly to the Association at its annual meetings.

The ratio of representation is one delegate for every five members. And permit us, also, not only to invite, but earnestly to entreat you to attend in person, particularly the next meeting, *in St. Louis, in April*, 1856.

Respectfully,

JOHN B. ALEXANDER, M. D.,
R. G. BUCKINGHAM, M. D.,
W. H. RUFFIN, M. D.,
Committee.

NATIONAL MEDICAL ASSOCIATION.

The last meeting of this dignified body in Philadelphia was the largest as well as one of the most harmonious and agreeable reunions of the profession which has ever assembled on this continent. Every thing that generous hospitality and enlightened civility could suggest, in order to render the meeting pleasant was done, both by the profession and citizens of Philadelphia.

The address of our townsman, Dr. Charles A. Pope, the retiring president, was well received, and is everywhere spoken of in the highest terms of commendation by the medical press. Our readers will find this address among the brief synopsis of the proceedings of the Association, published on another page, and we would commend it to their special attention, together with the very eloquent remarks of Mayor Conrad, on welcoming the delegates to Independence Hall. The next meeting, it will be seen, is to be held in Detroit.

MEDICAL MISCELLANY—SCISSORS AND PEN.

University of Pennsylvania.—The chair of surgery in this institution, made vacant by the resignation of Dr. Gibson, has been filled by the election of Dr. Henry H. Smith of Philadelphia. Dr. Smith is the author of a work on Operative Surgery, and son-in-law to the late Prof. Horner. Dr. Brainard, of Chicago, we understand was the rival candidate—the vote stood Smith 11, Brainard 9, Blank 1.

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Resignations.—Dr. E. Brown Sequard has resigned the chair of Physiology in the Medical College of Virginia at Richmond. Also Dr. Horace Green has retired from his post in the New York College and has been elected Emeritus Professor of Theory and Practice, with the understanding that he is to lecture on his speciality. Dr. Cox has succeeded Dr. Green.

Consumption Hospital.—The legislature of New York has passed a bill chartering a hospital for consumptives to be located in the city of New York. This is a good move.

St. Joseph Medical Association.—The members of this flourishing medical society are engaged in delivering a course of popular lectures on subjects mutually interesting to the profession and the public. The one recently delivered by Dr. Knode on Medical Ethics, is spoken of by the "Cycle" as a finished effort, and as "fully sustaining the established reputation of the lecturer as a gentleman of fine attainments in his profession. We would rejoice to see such living, active, efficient associations in other and in all parts of our State.

Demonstrator of Anatomy.—Dr. E. F. Smith having resigned the position of Demonstrator of Anatomy in the St. Louis Medical College, Dr. E. H. Gregory, of St. Louis, has been appointed his successor.

The Journal of Medical Reform.—We have received two numbers of this periodical published in New York, and edited by Professor J. M. Comings, requesting an exchange with us. This request we must respectfully decline, as, from an examination of the numbers before us, we are satisfied that we could not be of any service to the editor, nor his effusions beneficial to us. He is apparently so well satisfied with himself and the work in which he is engaged, that we feel disposed to leave him to pursue "per se" the sublime course which he has marked out for himself. We would remind the learned editor, however, that reform, like charity, should always begin at home.

Professorship Declined.—Dr. LaRoche, of Philadelphia, who was tendered the appointment of Prof. of Physiology and Pathology in the Memphis Medical College, has declined to accept on account of ill health.

Memphis Medical Recorder.—The fourth volume of this excellent journal commences on the first of July, and is to be increased in size and otherwise improved. This is an evidence of merited success at which we rejoice.

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Obituary.—Died suddenly in St. Joseph, Mo., on the 26th of May, Dr. James Sykes, a native of Delaware, and for a long time a practitioner of medicine in this city. Dr. Sykes was a gentleman of liberal education and of fine professional attainments,—a few years ago he removed from this city to St. Joseph where he was rapidly acquiring an enviable reputation as a physician and surgeon.

Gone to Europe.—Our able and accomplished townsman, Dr. Thomas Reyburn has recently sailed with his family for Europe, where he expects to remain some two or three years in the pursuit both of health and science. Dr. R. is a physician of mature judgment and fine acquirements, and is eminently qualified to profit by the scientific advantages which the European capital affords. During his absence he has consented to become a regular correspondent for our Journal.

Portrait of Dr. Austin Flint.—We have received a well executed lithographic likeness of this accomplished gentleman and able physician, published by his medical friends of the city of Buffalo on his retiring from the position of Editor of the Buffalo Medical Journal. This tribute of respect is alike creditable to Dr. Flint and to the physicians of Buffalo.

Hæmatemesis.—A writer in the London Lancet states that, after the failure of other remedies, he has succeeded in arresting an obstinate attack of hemorrhage from the stomach by the uses of ergot, in doses of ten or twelve grains in powder. Relief was prompt and satisfactory.

The Self-Injecting Ear Syringe.—This convenient and excellent instrument, the invention of Dr. S. P. Hullihen, of Wheeling, Va., is admirably adapted to syringing the ear, and may be used by the patient with ease and comfort; its peculiar construction effectually preventing the wetting of the clothes about the neck during its operation. We have never met with an instrument of the kind with which we are so well pleased as with this.

Hiccough—Dr. Upsher in the Virginia Medical Journal says: "this symptom is the result of spasms of the diaphragm, and can be relieved by a bandage applied tightly around the lower part of the thorax, which relaxes the diaphragm and causes a cessation of the spasms. This plan has given relief when every other had failed. It may also prove of much assistance in relieving cases of chronic vomiting, not depending upon organic disease of the stomach."

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Remarkable Escape.—On the 17th ultimo, we were called to see a fine healthy boy, aged seventeen months, son of Mr. C. A. Hiles of this city, who had just fallen accidentally from a window in the third story, some twenty-seven feet, on the brick pavement below. Strange to say, not a bone was broken, nor a drop of blood spilt, and the little fellow suffered no other inconvenience whatever, save a very slight bruise.

Professor N. S. Davis.—The New Jersey Medical Reporter, contains a well executed and faithful likeness of this gentleman. Dr. Davis is justly regarded as the father of the American Medical Association, and is well known as an able writer and a talented physician.

Ohio State Medical Society.—We are glad to learn that this body, at its late meeting at Zanesville, by an almost unanimous vote passed a resolution rescinding the resolution adopted a year ago, which affirmed "that it is not derogatory to medical dignity, or inconsistent with medical honor, for medical gentlemen to take out a patent right for surgical or medical instruments." This action was brought about by the decided disapprobation expressed by the American Medical Association at its recent meeting in Philadelphia, of the above quoted resolution, and in every way honorable to the profession in Ohio.

Medical College at Mobile.—Dr. W. Taylor in his annual address before the Medical Association of Alabama, selected as his subject, "The Eligibility of Mobile as a site for a School of Medicine." "The palm of medical teaching in the south," he says, "is vascilating—it does not appear to be centering to any particular point." Nor does any of the institutions yet established in the south, in his opinion, answer the wants of the southern student. We have long regarded Mobile as the best unoccupied point in the United States for a Medical College.

The American Medical Society of Paris—have rooms at No. 6, Rue des Quartre Vents, where physicians from the United States will find advantage in uniting with the members. The rooms are open day and evening, and are well furnished with the principal medical journals and books, and are frequented by the most eminent French physicians. Editors and publishers desiring to participate in this national reciprocity, can send books and journals to the care of Mr. Edward Bossuage, 138 Pearl street, New York, by whose generosity they will be forwarded.

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Treatment of Nocturnal Incontinence of Urine in Children.—Dr. Blaschko, of Freyenwalde, asserts that he has always succeeded in this infirmity by the use of a mixture of equal parts of Tr. Nucis Vomicæ and Tr. Ferri Acetici, in the dose of from 10 to 13 drops, twice every evening. In one case which resisted all treatment he resorted with success to a rotary battery; the conductor, a fine copper wire, being introduced into the meatus urinarius.

Dr. Hüber, of Zurich, recommends a mixture of Ex. Nucis Vomicæ 1 part, and Oxyd. Ferri Nigri 48 parts, made into 24 pills, of 2 grains each, one of which is to be taken night and morning. Nægele recommends Tannin in the dose of a grain, morning and evening—as we learn from the Gazette des Hopiteaux through our Boston cotemporary.

Pustule Maligne.—We have received a well written pamphlet by Dr. Wainwright of New York, on this rare affection, giving a short but clear view of its origin, nature and seat, with the differential diagnosis between it and *Furuncle* and *Carbuncle*, with which it is apt to be confounded. It is an interesting and creditable essay.

Cholera in New Orleans.—The cholera seems to have again visited New Orleans with considerable violence. During the month of June, the general mortality of the city was greatly augmented from this cause. At the last dates it was on the decline.

Multiplication of Medical Schools.—Many persons seem to regard the multiplication of Medical Schools in the United States as a great evil, and as tending to lower the standard of professional attainments. We believe, on the contrary, that the establishment of Medical Colleges in different parts of the country has the effect of diffusing medical knowledge, and consequently, of elevating the character of the profession. Wherever there is a city large enough to sustain good hospitals, there men of ability will be found, and there medicine may be taught with advantage. There is no good reason why students should annually flock in hundreds to Philadelphia, for the purpose of attending lectures, when there are at least a dozen other cities, scattered over the land, in which medicine is as well and faithfully taught as in that ancient and honored seat of medical learning.

To Subscribers.—We are unable to comply with the request of many of our new subscribers to furnish them with the back numbers of the present volume, as they are all out. This is the reason why some, who have desired it, have not been served with back numbers.

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THE ST. LOUIS

MEDICAL AND SURGICAL JOURNAL.

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PART I.—ORIGINAL COMMUNICATIONS.

ARTICLE I.

Life. By J. H. WATTERS, M. D., *of St. Louis.*

[Continued from page 311, No. 4, Vol. XIII.]

No. VIII.—*Some phenomena of Life considered in reference to the foregoing proposition, that the vital actions are reciprocal with oxydation.*—By a process of inductive reasoning we came to the general conclusion, that the law of reciprocal action and reaction, is the law of life;—That there is no reversal of the laws of matter in a living organism, but that vital actions result in accordance with these laws as necessarily and naturally under certain physical conditions, as do the actions of inorganic matter under other conditions;—That the external conditions of life occasion the oxydation of the organism, and that this oxydation is a necessary condition of life,—the antecedent with which the vital actions are reciprocal through the dynamic agents. We wish now to inquire how far this view of the subject is in accordance with vital phenomena; for, while it must be erroneous, if it be inconsistent with a *single* phenomenon or fact, yet, so far as it accords with, or explains the phenomena of living beings, so far it is confirmed and established. I am myself so fully persuaded of the truth of

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the proposition,—of the correctness of the induction, that it appears to me that it *must* be confirmed by every phenomenon of life. But I know that this very confidence may lead me into error; if so, let the error be exposed. A single fact may destroy a beautiful theory, but an indefinite number of theories do not alter a fact, though, as a glass, they may change the color or the manner of our seeing it. Nature is very obstinate, and will continue her own old fashion way, in spite of human genius. Doubtless, human genius is capable of devising a plan upon which a world might be constructed quite as good if not better than the present, but as we confessedly have not the power to execute our plans, and as nature cares but little for our council, it would be well perhaps to confine ourselves to the present order of things,—to the study of nature as it is. A very good sort of a world might be constructed, *perhaps*, upon the plan of having physical agents *inert*, *per se*, and at the same time endowed with efficient power to produce ordinary chemical actions, and of having independent powers in each living being to counteract the chemical forces, to develop the special forms, and to produce the vital actions in general. I confess that it appears to me contradictory to endow physical agents with *inertia*, and at the same time with the capacity of originating action in virtue of inherent properties. The celebrated Euler, one hundred years ago, contended that such views were absurd. It is true, that the *American Editor* of his "letters," in the year of our Lord one thousand eight hundred and thirty-three, declares in a note, as his modest conviction, with much knowledge and forethought, that Euler did not understand what he was talking about;—

"What care I?
Better to err with Pope, than shine with Pye."

But whether there would be any difficulties to the practical application of this plan or not, it is evidently not adapted in the present order of things, though nothing can be easier than to assume an absolute force as the direct cause of any action. Then, again, there might perhaps be a very good sort of world with but one force "emanating at once from the Divine Will," if this one force can be transformed or metamorphosed into any number of "affections of matter"—heat, light, electricity,

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chemical affinity, magnetism, nerve force, vital force, mechanical motion, &c. Whether this "one force" theory be practicable or not, nothing can be more easy than to imagine a force transformed to explain every thing; and if it is not so in the present order of things, it certainly ought to be. But, as the imagination can do nothing, if this one force be thus transformed, it must either have the inherent power of transforming itself, or it must be so changed by somewhat external. If changed by somewhat external, then there must be a second force; for, what chances force is force. Now if this somewhat external is capable of transforming a "motion and not a thing moving" into heat, light, electricity, chemical affinity, vital force, &c., it is certainly capable of modifying the direction of action itself directly; and hence, there is no ground for assuming the first *transformable force.* According to the correlation theory, it would require a *peculiar* "material substratum" to convert heat into vital force; then with such a material substratum, there is no need of a peculiar vital force—the action is reciprocal with an anterior action, the direction is due to the "material substratum" directly, or rather to the adjustment of physical agents (including the dynamic agents) in the organism. We will now consider some vital phenomena in reference to this view of the subject.

First, of "*Dormant Vitality,*" as it is called. This phrase is used not only to express the condition of a seed prior to germination, but it is really used as an explanation of that condition; just as men often think they have explained the fall of a stone to the earth, when they refer it to gravitation. The facts are, a seed may be preserved an indefinite length of time without presenting any of those phenomena which are peculiar to living organisms; but when heat, air and moisture are applied, these phenomena appear,—vital actions originate. How is it that heat, air and moisture are essential conditions to vital action in the seed? The mind will not be satisfied with the mere fact; it must have, if not a real, an imaginary explanation. But it would be an accident very improbable, if the mind were to arrive at a correct synthesis without the aid of a close and accurate analysis. Considering the vital phenomena as a concrete whole, without any analysis whatever, the mind,

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at a very early period in the history of philosophy and science, assumed a peculiar "vital principle" or "force" as the direct cause of these peculiar phenomena. This peculiar force or principle does not assume in the mind any definite form, but is endowed with imaginary properties or attributes sufficient for every emergency. But, as has been seen, when the test of analysis is applied, these assumed properties are often found contradictory, and hence, absurd. Notwithstanding the rigid analysis of the last century, this hypothetical synthesis still obtains to a considerable extent, because the spirit of the last epoch in science has been one of analysis almost exclusively, and the mind has not been directed to developing a more rational and philosophic synthesis from the results of analysis; the popular mind is only now beginning to appreciate the fact that the great end and use of analysis is the consequent synthesis. Upon the supposition that a "vital principle" is the direct cause of vital actions, this *principle* must exist in the seed prior to germination; but as yet it is not made manifest by vital action, hence it is in a latent or dormant state; but when heat, air and moisture are applied, it is made manifest by vital action, hence these conditions *excite* or *stimulate* it into action. This is the way those who assume a "vital principle" reason. But we have seen reasons to conclude that there is no such peculiar force; if there were, it could not be dormant or inactive,—it could not be simulated or excited. Hence it is clear that this explanation of the phenomena of "dormant vitality," will not do. Then again, those who accept the "correlation" hypothesis, think they avoid these difficulties. They do avoid these; not by solving them, however, but by removing them one degree. In "gun-powder," for instance, there is not a "dormant force," but an inactive action—a motion which is not a motion, but a "gross palpable motion" in the metamorphosed form of chemical affinity. Theirs, equally with the "vital principle" hypothesis, is a synthesis without analysis. Heat, air and moisture, do not *stimulate* the vital principle, say they, but the heat is metamorphosed into a peculiar vital force. The insuperable difficulties at the very foundation of this hypothesis have already been considered. Heat, by itself will not occasion vital phenomena in a seed, neither will air

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or moisture separately; but all these conditions co-operating, tend to produce chemical action. Consequently, so far as the phenomena under consideration are concerned, the weight of evidence is strongly against the correlation hypothesis, which is without evidence. But we have seen that heat cannot be metamorphosed into any thing else, whether it be a concrete substance or an abstract property; for, if it be a concrete substance it cannot be changed unless it be a compound, and if it be a compound it is composed of two or more forces, which is contrary to the correlation hypothesis; and if it be an abstract, it does not possess *form*, and hence cannot be *metamorphosed* or *transformed*. Hence, we have every reason to believe that the conditions, heat, air and moisture occasion chemical action or oxydation in the seed, that these conditions are conditions of both life and decay, because decay is a condition of life. This I say is the natural interpretation of the phenomena, but other explanations have been thought necessary, because of previous assumptions or hypothetical syntheses, with which this is incompatible; but if it is compatible with the results of analysis, this is an argument against those hypothetical syntheses with which it is incompatible, if the explanations based upon these assumptions, lead, as we have seen, to manifest absurdities. We have seen that the external conditions of life are conditions of oxydation; that there is oxydation wherever there is life, and that life and oxydation are proportional in a living organism. We now see that the organism may, if it be deprived of the conditions of oxydation, retain its susceptibility of vital action for an indefinite time. But if we deprive a seed of the conditions of oxydation, we deprive it of the conditions of change; hence it retains its intimate structure, its arrangement of parts, its peculiar adjustment of physical agents. True, this of itself, does not *prove* that this intimate structure, this arrangement of parts, this peculiar adjustment of physical agents, is all that is peculiar in the seed upon which the speciality of the vital actions depend; but when taken in conjunction with the previous results of induction, it renders this position exceedingly probable,—amounting in my mind almost to a demonstration. Now, if this peculiar adjustment of physical agents is the *true* vital principle, it is this that determines

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the speciality of the vital actions. The actions themselves depend upon an antecedent, and this antecedent is that oxydation with which the vital actions are always proportional. It is said, that Franklin proposed to certain learned men the question, why, when a fish is put into a vessel full of water, does not the water overflow? Some of these learned men explained the matter one way, some another; their thoughts did not run back to the preliminary question,—is such the fact? So learned men have been proposing to themselves the question, how is it the chemical principles and forces are counteracted in a living organism? Some answer the question one way, some another; each satisfactorily to himself perhaps,—none to me, I confess. These learned men scarcely propose to themselves, seriously, is such the fact?—they start with "what is held," with outward appearances, with the popular doctrine of the day, but do not analyze the subject to see if indeed the vital actions are not in perfect accordance with physical and chemical laws. A chemical action is observed; every change must have a cause; hence, without further analysis, they *assume* an absolute force as an inherent property of matter—"chemical affinity." This assumption is evidently not the result of rigid analysis; it is a synthesis without analysis; it is hypothesis. As hypothesis, whether true or false, it makes the way and necessity for other hypotheses. If a false hypothesis, the more we build upon it as though it were true, the further we get from the truth—from the realities of nature. But do you who will not analyze, say whence action? I answer, whence matter? Whatever answer you may give to my question, is it not an answer equally satisfactory of yours? You say matter cannot annihilate itself; I say neither can it annihilate physical power. But is your assumption of "chemical affinity,"—of absolute physical powers, the only position in the premises? By no means; this is most precipitate. Look upon matter, light, heat, electricity, and all physical agents as inert, really and absolutely; consider the universe a wise adjustment,—an exquisite arrangement of these physical agents; now, by the same Intelligence that you account for inherent powers adapted to definite results, I account for the wise adjustment; by the same Power that you

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account for the *existence* of physical agents, I account for the origin of action. Action once existing coeval with matter, what agency can arrest it, what force can annihilate this physical power save the Absolute, save a power adequate to its origin? As physical power must give a strict account of itself, and cannot be annihilated by physical agency, all we have to account for is the modifications and changes observed around us, about us, and within us. These modifications and these changes are to be referred to the adjustment, to the mechanism.

And let it be observed, that, unless you endow your assumed absolute forces (or, if you please, modifications of one force) with intelligence and volition, an adjustment no less profound—no less wonderful, is required. Do you ask, therefore, what is the condition of action at the present instant of time? I answer the action of the last instant. Really, "the present is the offspring of the past and the germ of the future." The actions of the present instant, constitute but one link in a chain of sequences having its origin with matter in the Absolute. Do you ask the conditions of the speciality of action? I answer speciality of adjustment. Under certain conditions (adjustments) oxygen *unites* with zinc to form the oxyd of zinc, in accordance with chemical laws, under certain other adjustments the oxygen, in the oxyd of zinc, *separates* from zinc, no less in accordance with chemical laws; under certain adjustments, we have the oxydation of organic compounds in acccordance with chemical and physical laws, under certain other adjustments, we have organization and life no less in accordance with chemical and physical laws. As oxydation is antecedent to the de-oxydation of an electrolyte, so eremacausis is antecedent to life.

But this view of the subject is no less confirmed by the phenomena of cold blooded animals than by the phenomena of "dormant vitality." If you increase or diminish the external temperature, within certain limits, you increase or diminish the vital activity of these animals; but as you increase or diminish the temperature, you increase or diminish oxydation. Heat is a condition of oxydation, oxydation is a condition of life. The objections to this conclusion are based upon hypo-

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theses only, which have already been considered, and need not be repeated. Oxygen and moisture are also conditions of oxydation, but as you increase or diminish these, within certain limits, you increase or diminish vital action correspondingly. All these facts confirm the proposition arrived at inductively, that vital action is reciprocal with oxydation.

Second, of *Reproduction*, *Nutrition* and *Secretion*. From a consideration of vital phenomena, we have observed that the conditions of life are conditions of oxydation; that oxydation and vital action are proportional wherever there is life; that if a seed be excluded from the conditions of oxydation, there is no life, but when these conditions are supplied, oxydation and vital action begin; that as the conditions of oxydation are increased or diminished, vital action is increased or diminished proportionally. All these facts go to establish that oxydation is a condition of life. But if the vital actions are reciprocal with oxydation, the speciality must depend upon adjustment. I propose now to consider vital phenomena as manifested in reproduction, nutrition and secretion, and see if from these there is evidence that the speciality of vital action depends upon adjustment. Then conversely, if the *speciality* depends upon adjustment, the *action* must depend upon an antecedent, and this antecedent *may be* oxydation.

That "like beget like," and "omne vivum ex ovo," are considered two universal laws of reproduction. The phenomena classified by Steenstrup, under the name of "*Alternate Generation*," were generally discredited for a time, because they were apparently contrary to these laws as received. A most valuable lesson is offered the reflective mind, in the consequences following the establishment of these phenomena. These, and analogous phenomena, have not had their legitimate effect in science. Theoretically, we all contend, that theories should be based upon facts, but practically, a most vigorous attempt is always made to reconcile newly discovered facts with hypotheses which had their origin in very limited facts. If we adopt the only true method of synthesis, and seek a law which shall embrace all the facts as known, we at once discover that the so-called "law"—"like beget like," cannot be received in a scientific sense. It will be admitted by all scientific men,

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that the parents do not "beget" or "generate" any thing *subsequent* to the egg. But the egg, containing the germinal vesicle and germinal spot, surrounded by albumen, does not resemble the parents. An individual animal resembling its parents is the ultimate result of a *process of generation*. But the parents really do not beget or generate the egg. The primordial cell is the result of an independent *process* of generation. To establish this point, it is only necessary to refer to the fact, that the generation of the spermatozoa may occur externally to the male, and that the act of fecundation is not necessarily under the influence of the female, but may occur externally, *after* the male and female contributions have been cast off. What general law, therefore, will embrace the phenomena of "gemmation," "alternate generation" and "regular generation?"

Dr. Carpenter has observed the exact relation between the phenomena of "alternate generation" and those of what he calls "development." But what does he conclude hence? He concludes, therefore, that the phenomena of what Steenstrup terms *alternate generation*, are phenomena of "development;" hence, that all the "zöoids" of the aphis cycle together, constitute one generation,—one individual. He concludes that *all* that proceeds from one germ, originating only in the union of male and female contributions, constitute one generation, one individual; hence, that if you cut a plant into an indefinite number of pieces, and each piece takes root in the soil and grows separately, they all together, nevertheless, with the original plant, constitute one generation and individual; hence, too, all the potato plants that have proceeded by the subdivision of the tubers, year after year, from a single seed originally, together, constitute one generation and individual. Dr. Carpenter is true to his principles here, and draws these conclusions himself;* but there is evidently something wrong if such conclusions legitimately follow. I shall show that all this theory of Dr. Carpenter proceeds from an old and vague idea, of which he does not seem able to free himself, that a "special vital force" is *produced* by the union of the

* See Principles of Comp. Phys., chap. xi.

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"germ-cell" with the "sperm-cell." With this idea, he reasons,—as the act of fecundation produces *one* peculiar "vital force" or "principle," and, as all that follows till another act of fecundation, is produced by this one force or principle, all that follows, together, constitutes one generation and one individual. But Dr. Carpenter positively denies in his works, that any such "peculiar force" originates with the germ! True, but I am not accountable for his inconsistencies. It is equally true, that throughout his works, he tacitly assumes such a force originating with the germ, under such phrases as "nisus formativus," germinal capacity," &c. In the subject now under consideration, it is evidently the glass through which he views all the phenomena. A few quotations will be sufficient to establish this point. Dr. Carpenter says: "It has been remarked by Mr. Newport,‡ that spermatozoa, whose spontaneous *motility* has ceased, no longer possesses the fecundating power; and this fact concurs with other phenomena to indicate that it is not only a certain *material* but a *vital force* of which that material is (so to speak) the vehicle, which is required to effect this most important operation."* Now we have seen that the "nisus formativus," the "germinal capacity," the "developmental force," the "vital force," the "vital principle," or *that which determines the special vital actions*, (for it is this that these various phrases are used to express,) *must* either be the special adjustment of the physical agents, or an efficient force. It is perfectly clear from the above quotation, and from his works generally, that Dr. Carpenter means by the above phrases, an absolute, efficient force "of which the material is the vehicle." He may define it as he pleases,—he may call it "property with which matter was originally endowed,"† or "a metamorphosed form of heat," or "the First Cause i direct and immediate operation,"§ — he means by it a something, which determines the speciality of the vital a - tions,—a som thing "of which the material is the vehi le.' Hence, whatever he may define it, he *must*, whether he will

* Human Phys., § 973.
† Cyclopedia of Anat. and Phys., Art. Life.
‡ Comparative Physiology.
§ Brit. and For. Med. Chir. Rev. Vol. iv., p. 409.

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or not, endow it with capacities to effect that which being effected, it is assumed to explain; that is, he must endow his "vital force" with capacities to determine the speciality of the vital actions. We have seen that the direct cause must either be a special adjustment or mechanism, or it *must* be an intelligent voluntary power. In fact, it is clear, that he must admit that *his* "vital force," "nisus formativus," "germinal capacity, &c., "is the direct and immediate operation of Supreme Power and Intelligence." In fact, he thus defines it himself in his review of Owen and Paget, on Reproduction and Repair, found in the "Brit. and For. Med. Chir. Rev.", Vol. iv., p. 409. It is in this article especially that he develops his opinion, that all that proceeds from one fecundation or "union of germ cell and sperm cell," constitues one generation and one individual,—that the phenomena of "alternate generation" are phenomena of development,—that there is really no such thing as "alternate generation." That the principle from which this hypothesis follows, is, that a peculiar force is "*created*" by the union of the "germ cell" and "sperm cell," and all that follows is produced by this peculiar force thus "created," and hence, constitutes but one generation and one individual, will appear from the following quotations:—

"The union of the contents of the sperm cell and of the germ cell again takes place in the ovule; and the result is a vigorous germ, capable of giving origin to a similar multitudinous progeny, in virtue of the *new creation* of what Mr. Paget would call 'germ power,' which this process *has called into existence.*" * Again, he says, "To use Mr. Paget's language, it is one and the same 'germ force' which is in operation in all these cases," (between one fecundation and another in the phenomena of alternate generation); "a new 'germ force' can only be *created* by a new 'act of generation;' and all that is the product of the continued action of the same 'germ force' must either be distinguished as belonging to the same 'generation,' or some other term must be invented to designate it." † Again, in speaking of the propriety of the term of Prof. Owen—

* Ibid, page 437.

† Ibid, page 438.

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"Parthenogenesis," he says, "To this term we have no objection whatever, except that it tends in our apprehension to indicate a relation between two things which are not only *different* but *opposed*. For, if we are correct in the view we have taken of the essential nature of these acts" (generation and development), "the *reunion* of the contents of the 'sperm cell' and 'germ cell' which is characteristic of the one, and the *recreation* of 'germ force' thereby effected, are altogether opposed to the act of *separation* whereby cells are multiplied and the 'germ force' distributed among them, and thereby progressively weakened." *

Now, it is perfectly clear, that Dr. Carpenter assumes that *one* something (he may call it and define it as he pleases) is "*created*" by the act of fecundation, or by the union of the male and female contributions, capable of determining the speciality of the vital actions. As this one—what shall I say? As this one "*modus operandi* of Supreme Power";† or, if you please, "metamorphosed form of heat," "*created* by the union of the germ cell and sperm cell," produces all that follows between the germ and the fully formed animal or plant, this process is but the "*development*" of the one force thus *created*. But Dr. Carpenter observed the relation between this "development" and what Steenstrup calls "alternate generation;" hence the conclusion was natural to his mind, that the phenomena of alternate generation were *explained* by his term "development"—that the "grand-nurse," "nurses," "cercariæ" and distomæ, all together constitute one generation one individual, one development.

It must not be supposed that Dr. Carpenter did not see the difficulties to his hypothesis, in its results. He says, "there seems, then, to be no medium between, on the one hand, regarding the entire fabric developed from a single generative act (i. e. the fertilization of a single 'germ cell' by the contents of a 'sperm cell') as forming *one organism*, however great may be the multiplication of similar parts, or however independent these parts may be of each other; and the including every product of its own development, whether contempo-

* Ibid, page 441.
† Ibid, page 412.

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raneous or successive, as *one generation;* or, on the other hand, attributing a distinct individuality to every component of the most complex organism, and designating every augmentation of the number of its cells, by the subdivision of those previously existing, as the production of a new generation." (I admit the alternative fully). "In either case, it must be *freely admitted*, we are forced to do a certain violation to our ordinary conceptions; but if, on the one hand, it seems strange not to admit the proper individuality of a completely independent being (such as a potato plant, which has been developed, in common with several others, from a single tuber), nor to allow that in developing itself from a bud into a complete plant, and in putting forth its leaves and flowers, and in maturing its seed, it passes through a complete generation; on the other hand, it seems yet *more absurd* to regard the human organism, or any other composite fabric, as made up of a congeries of individuals, and to regard each of these as entering upon a new generation whenever its component cells may have been renewed."* He admits here that his hypothesis *is absurd*, but contends that the alternative is "yet more absurd." He does not, however, look back to his principles for the source of the difficulty, but thinks it exists in the terms and not the ideas, and that it would be better to invent new terms. Professor Owen, however, in his "Parthenogenesis," adopts the alternative in part, and contends that whatever is capable of *independent life*, is a distinct individual and generation. He adopts the idea of Prof. Ed. Forbes, that Steenstrup's doctrine of "alternate generation" is applicable to plants—that the leaf buds, flower buds, stamens, and pistils, are distinct individuals and generations. But Prof. Owen does not seem to perceive the erroneous principle of Dr. Carpenter which *leads* inevitably to absurd conclusions, for he adopts the same principle, and attempts the fruitless task of obviating the necessary results. Such an attempt must lead to equal absurdities. He adopts the hypothesis that a peculiar vital force has its origin in fecundation only, or in the union of germ and sperm influences. The great question, therefore, which presents itself to his mind is, how germs in the

* Comparative Phys. § 513.

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polypes and medusæ are fecundated, where there are several "alternate generations" without male organs, and in phanerogamic plants, where there are many? Now for his hypothesis. He contends that a portion of the original male contribution in the egg or seed is *preserved* and fecundates the subsequent "alternate generations" (!) I perfectly agree with Dr. Carpenter that, to say that each leaf-bud and flower-bud which may have appeared for many years upon a phanerogamic plant, was fecundated by a portion of the male influence in the original seed, is absurd. I moreover agree with Carpenter that the same reasons that Prof. Owen claims that each bud is a separate individual and generation, would force him to admit that *sometimes* each leaf and even part of a leaf, is a separate individual and generation, and according to him must have been fecundated by a portion of male influence in the original seed; for even part of the leaf of some plants will take root and grow. So when I say that Dr. Carpenter's conclusions are absurd, I have Prof. Owen to back me; and when I say that Prof. Owen's are absurd, I have Dr. Carpenter to teach me; but when I say that the absurdities of both result from a common erroneous hypothesis, that the act of fecundation "*creates*" a peculiar force, I claim that I have their works, facts, and reason to back me.

I confess here, that *facts* compel me to admit what Dr. Carpenter said Prof. Owen is forced to admit from his principles, and what seemed to him so absurd; that is, that each cell in the most complex organism, is a separate, entire individual organism; if an entire organism, then it must be a distinct generation; if a distinct generation, then *all the conditions* necessary to generation, are furnished in the production of each new cell; if all the conditions *necessary* to generation are furnished in the production of each cell in the most complex organism, then the question arises, are not the conditions of what is called "regular generation" the same in kind.

I propose now considering, briefly, each of these points. I consider this the true method of investigating the subject, rather than the method of Carpenter and Owen, who start with certain primitive notions of "regular generation," and attempt to make the further development of facts square with these

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notions. Let it be borne in mind, that the position at which I am now aiming, is, that the special adjustment of physical agents in the organism is the special condition which *determines* the vital actions, is the "nisus formations," the "germinal capacity," the "vital principle," the "vital force," &c., of authors generally. Let it be borne in mind, also, that you are forced to one of two positions, if you have any position, either that the special condition is this adjustment, or that it is the direct action of an adequate intelligent, voluntary, absolute power.

First, then, *each cell in the most complex organism is an individual organism.* The essential conditions of life, are, an organism, fluid plasma, oxygen and heat. This far is admitted. That is an entire Organism then, which, when supplied with the proper fluid plasma, oxygen, and heat, performs vital actions. Does each cell then in the most complex organism only require a supply of proper fluid plasma, oxygen and heat, for its special actions? If so, then it is an *entire organism.* That the "grand-nurses," "nurses" and cercariæ of Steenstrup, only require a proper supply of plasma, oxygen and heat, for the performance of their vital actions, is shown by the fact of their separate existence; that the buds of plants only require a supply of these conditions is shown by the fact that they may live independently of the parent tree. But this capacity of independent existence, is not a *sine qua non* of an entire individual organism, i. e., the fact that a portion of a complex organism, when separated, will not perform its vital actions, does not *prove* that the constituent cells of this part are not entire individual organisms. The separation deprives it of the proper fluid plasma, oxygen or heat, which was secured to it only by the co-operation of the individual cells contained in other parts of the animal or plant. If the dependence of the vital actions of one part of a complex organism upon other parts, *proves*, that the former is not an *entire* organism of itself, then the whole animal together is not an entire organism, for the vital action of animals is dependent upon plants. But for what are animals dependent upon plants? Now all facts connected with the subject, go to show that each individual cell in the most complex organism is dependent only for a

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proper supply of fluid plasma, oxygen and heat. It is certainly not necessary to dwell upon these facts;—the facts connected with the transfusion of blood, are, I think quite sufficient. I therefore conclude that not only each component cell, but each germ granule capable of producing a cell when under the influence of these conditions, is an entire organism. As the surrounding fluid is to the Protophyta and Protozoa, consisting of single cells, so the circulating blood is to each individual cell in the human body;—each component cell is, as it were, *immersed* in this fluid plasma, and its vital actions are as independent as those of the Protozoa.

But, if each cell in the most complex organism is *an entire organism of itself*, each cell is a *distinct generation*. The truth of the proposition that each cell is a distinct generation, depends entirely upon the proposition that it is an entire organism, and not upon the *modus operandi* of its production. Our meaning of "generation" is entirely independent of any knowledge of the *modus operandi* of generation. I therefore deny the right and condemn the method of Dr. Carpenter in denying "generation" wherever he does not perceive a conformity to his hypothesis of the *modus operandi* of what he calls "regular generation." But if the hydra be cut into many parts, each part will continue to live and form a distinct hydra; does this cutting therefore *produce* a generation? By no means. All that the *cutting* produces is the separation. The union of individual cells,—each an entire organism, *constitutes* the hydra. When this hydra is cut into parts, there are not so many individual organisms *united* into one compound organism. As the individual cells constituting each part, are supplied with proper plasma from the surrounding fluid, they continue their vital actions, and thus each piece lives and grows a separate hydra. As the union of the cells does not *generate* an organism, but *constitutes* a compound organism, so the division of a compound organism does not generate an organism, but the individual cells constituting each part were already generated. For instance, each bud of the tuber is not an individual potato but it is an individual bud. Its separation does not generate an organism, but if it be furnished with proper conditions, the result of its vital actions will be an in-

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dividual plant. The fully formed plant and animal is the ultimate goal arrived at through the generation of cells.

But, if each cell in the most complex organism is a distinct generation, then all the conditions *necessary* to generation are furnished in the production of each new cell. This proposition I consider self-evident, and therefore will not dwell upon it.

Now, if all the conditions *necessary* to generation are furnished in the production of each cell in the most complex organism, and if the fully formed plant or animal is arrived at through the generation of cells, are not the conditions of what is called "regular generation" the same in kind?

The first question to be considered, is, what are the condition of cell generation? The generation of cells is a vital phenomenon; hence, the *conditions* of cell generation are the conditions of life. As each cell is an entire organism, it must be individually endowed with an entire "vital principle" or *cause* of the speciality of its actions; if so, each cell must be fecundated by the union of "germ" and "sperm" portions, *if* this union is essential to the origin or "*creation*" of a distinct "vital principle" or cause of the speciality of the vital actions. Now, in what sense, in conformity with the facts in the case, can we consider each cell endowed with a distinct "vital principle," and in what sense is it fecundated? Dr. Carpenter says in one place;—"Every cell lives *for* itself, and *by* itself, like each of the solitary cells of the humblest Protophytes."* Elsewhere, as we have seen, where he has a particular hypothesis to sustain,—when he attempts to disprove "alternate generation," and to show that the phenomena are phenomena of what he calls "development," and that "development" and "generation" are "antagonistic," he says:—"it is *one and the same* 'germ force' which is in operation in all these cases" (by "cases" here he means *his* "development" and *Steenstrup's* "alternate generation"); "a *new* 'germ force' can only be *created* by a new *act of generation*."† (By "act of generation," he means the union of "germ cell" and "sperm cell"). These two propositions are evidently incompatible; they are self-

* Human Physiology, § 103.

† Brit. and For. Med. Chir. Rev. vol. iv., p. 438,

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contradictory, and hence, one or the other must be false. If "every cell lives *for* itself, and *by* itself," every cell must have in itself and by itself a *somewhat* which determines its actions, and hence, "*one and the same* germ force" cannot be "in operation in all these cases." What, therefore, can we understand of the nature of the *cause* of the special "*mode of action*" of each cell. In the first place, it must either be intelligent and voluntary, or it must be necessitated. In view of the facts, no one can believe that every cell is endowed with an intelligent voluntary agent which determines its *mode of action;* nor can he believe that the act of fecundation, *creates* such an agent which is "subdivided" indefinitely in the subsequent "developmental process." Then he *must* conclude that the *cause* of the special "mode of action" in each cell is necessitated. If necessitated, then he is *forced* to admit that the cause of the special *mode* of action is adjustment, or the special arrangement of physical agents. As every cell is this special adjustment, every cell has *in* and *by* itself that somewhat which determines its "*mode of action.*" This adjustment is determined by the "mode of action" of pre-existing cells; hence reproduction, hence fecundation, and hence generation. Thus concentrating our attention for a moment to a single point, we are enabled to view the whole physical universe as one sublime adjustment, having no power within itself either to originate or to annihilate action; then to view each cell and germ granule as an integral part so adjusted as to determine vital action. As it has not been incumbent upon us to account for the origin of physical agents and the adjustment of the universe and the origin of action, neither do we stop inquire as to the *origin* of organized beings. But as each action now existing is to be referred to anterior action with which it is reciprocal in virtue of the *inertia* of physical agents, so each organism now existing is to be referred to an anterior organism, resulting as a necessitated consequence in virtue of special adjustments.

But if every cell is an entire organism, and possesses in and by itself that somewhat which determines its mode of action, and is hence a distinct generation, what are we to say of Dr. Carpenter's view, that "regular generation" and his "develop-

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ment" are essentially different,—even "antagonistic?" Or, to come to our original question, are not the conditions of cell generation and of the so-called "regular generation" the same in kind? The antagonism which Dr. Carpenter imagines, is, that "Development is by *subdivision* and Generation by the *reunion* of cells." Does this antagonism exist in fact, or only in the imagination? It must be admitted that the *origin* of the "embriomic vesicle" or "primordial cell," is as yet involved in much mystery. But let us admit with Dr. Carpenter, that "the spermatozoon may be looked upon, as a sort of solidification of the contents of the 'sperm cell,' endowed with a temporary power of spontaneous movement, for the purpose of bringing it into contact with the 'germ cell,' and resolved by that contact into its original fluid form, in which it is capable of acting upon the product of the germ cell within the ovum." Is there any thing in this *antagonistic* to the "multiplication of cells by a process of *continuous growth?*" I am under the impression that the phenomena of "alternate generation" as classified by Steenstrup, are destined a more glorious result than to be explained away either by Carpenter or Owen,—by the one, reduced to our vague ideas of "regular generation" in the reservation of a portion of the "original sperm influence," by the other, reduced to our ideas, no less vague, of the "process of continuous growth." This is a matter, not of authority, but of thought. I am under the impression that facts will ultimately establish that the whole phenomena of organic life even in man, including "regular generation," "development," growth, assimilation, secretion, and nutrition, (except, perhaps, interstitial) are phenomena of alternate generation as observed in the distoma and aphis. Organic life is essentially the same in plants and animals; and the study of the phenomena of plants and the lower order of animals will furnish the only key to the more complicated phenomena of the human organism. How erroneous, therefore, the method which attempts to explain the simple by the more complex, of which, it must be admitted, we have but a vague idea. Let us rather adopt the opposite method.

Let us commence with the male and female organs of generation. We may consider the epithelial cells of the tubuli

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seminiferi as *part* of the compound organism,—man. The "vesicles of evolution" may be said to have their origin in these epithelial cells; the spermatozoæ have their origin in these "vesicles of evolution." Here are two "alternate generations." The ovule has a similar origin in the ovisac. Dr. Carpenter would *explain* all this by his phrase, "increase by contiuous growth;" but the next step is his "regular generation." From the ovule of the female and the spermatozoæ of the male, the "primordial cell" may be said to originate. Do facts show an "antagonism" between the origin of the "primordial cell, and the origin of the spermatozoa? Dr. Carpenter would not contend that the epithelial cells can produce "vesicles of evolution" from inorganic elements, but they must be furnished with a *plastic* material which had its origin in other cells; so with the "vesicles of evolution" in giving origin to spermatozoæ. Admit that the spermatozoa, "resolved into fluid form," passes *directly* to the ovule of the female to form the primordial cell, and that the fluid that passes to the "vesicle of evolution" to form the spermatozoa, does *not* pass directly from the cell in which it was elaborated,—does this constitute an essential difference, an "antagonism?" There is a "union" in the one case quite as much as in the other. In this sense every cell in the most complex organism is fecundated; in no other sense have we reason to believe there is fecundation at all. Hence, "regular generation" is really "alternate generation." But you say the ovule of the female will not be developed further unless it be furnished with spermatozoae. Neither will the primordial cell effect any thing, unless it be furnished with a fluid prepared by other cells; neither will the fully formed animal live unless it be furnished with material prepared by plants; neither will the primordial cell of plants effect any thing unless it be furnished with a plasma prepared by other cells, and we have reason to believe that no cell, not even of the lowest cryptogamic plant, can produce a progeny unless it be furnished with plasma prepared by other cells. It is true, plants assimilate inorganic matter, but there is no evidence, so far as I know, that any one cell can begin and consummate this assimilation within itself. This rgument need not be continued. It seems clear, that there

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is in fact no "antagonism" between alternate generation, or, if you please, "increase by continuous growth," and "regular generation";—that the conditions are the same in kind.

But if you confine your attention to the higher orders of plants and animals, and, rejecting analysis, look only at ultimate results, you may object that the offspring resembles both the male and female parents, though aliment is furnished only by the female, and therefore the conditions under which the "primordial cell" originates must be *essentially* different from the conditions of "development" or of "alternate generation." That this conclusion does not follow, we might, in addition to the argument from the more simple to the complex, already given, direct attention to the lower orders of animals and plants,—to Fungi, the Entozoa, and even the Honey-Bee, and point out what influence material prepared by other organisms has upon the *ultimate result*. And if this were necessary, it would be to the point, as the "primordial cell" is in the condition of the very lowest order of animals. But all this is unnecessary, as a sufficient answer to the objection is in the objection itself. If the spermatozoae determine the character of the "primordial cell," which it undoubtedly does to a considerable extent, the spermatozoae themselves must be as determinate; but spermatozoae are *alternately generated*.

But space is only afforded to give the foregoing outline of the argument to establish that the conditions of "alternate generation," "regular generation," development, growth, assimilation, nutrition, and secretion, are the same in kind. The details of the argument must be left to the reader. If the conclusions be correct, the further conclusion that the direct cause of the speciality of the vital actions is special adjustments of physical agents, and not a special absolute force, is inevitable. I now wish merely to show that Dr. Carpenter, from principles maintained in his works, is himself *forced* to the same conclusions.

He contends throughout his works, that the speciality of vital actions are due to a special "*vital force*," which he "feels satisfied has as certain an existence, and as definite a sphere of *operation*, as chemical affinity." * But he adopts the "cor-

* Human Phys., page 118.—See Note.

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relation hypothesis" in accounting for the origin of his "vital force." And, for what has Dr. Carpenter received great credit from the correlation school? Lo! for pointing out the necessity of a special "material substratum" as the *condition* of metamorphosis of force. Then, according to Dr. Carpenter, the organism is the "material substratum" by which heat is metamorphosed into his "vital force." But if the "material substratum" determines the force, he is *forced* to admit that the "material substratum" determines the "germinal capacity," the "nisus formativus," &c., and as he makes his "material substratum" *distinct* from his "vital force," he is *forced* to admit that the union of the "germ cell" and "sperm cell" only give a definite and determinate "material substratum." But not only in his review of Paget and Owen, but in the last edition of his "Human Physiology," in which application of the correlation hypothesis is made, he says:—"That these various phenomena" (all the vital phenomena of the human organism) "are to be regarded as manifestations of *one and the same* vital force, of which the several modifications of organic structure that exhibit them are the respective instruments, may be argued, not only from the facts already urged, *but also from the community of origin of all the tissues and organs of each individual, in a single primordial cell.*"* Now Dr. Carpenter does not contend that the "material substratum" of the fully formed animal is "*one and the same*" as that of the primordial cell; and if the "material substratum" determines the metamorphosis of heat into vital force, he *must* admit that the vital force is not "*one and the same.*" Hence, he is forced to admit that the *speciality* of the vital phenomena is due to the "material substratum," or the special adjustment of physical agents in the organism. His philosophy is still more bungling in this, that he makes his "material substratum" determine the "metamorphosis" of heat into vital force, and then makes his vital force determine the vital phenomena; just as if one were to say that the steam engine, as a "material substratum," determines the metamorphosis of steam into a peculiar steam-engine force, and that this special force determines the direction of action in the engine. I think sound

* Human Physiology, § 113.

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philosophy would force him to admit that the "material substratum" or adjustment of physical agents directly determines the speciality of the vital actions:—First, because with such an adjustment as Dr. Carpenter himself assumes, such a special force is *unnecessary*:—Second, because the existence of such a metamorphosed force is not *proved*:—Third, because no force, in the sense in which he uses his "vital force," could determine the vital actions unless it be intelligent and voluntary:—Fourth, because, as we have seen, the "correlation" hypothesis is involved in absurdities. For, if heat, light, electricity, &c., be not entities, as he assumes, page 358, they cannot be metamorphosed or transformed; if they be entities, as he assumes, page 773, they cannot be metamorphosed or transformed unless they be compound, which is contrary to the "correlation" hypothesis.

If, therefore, the "material substratum," or the adjustment of physical agents, be not only the cause, but the direct cause of the *speciality* of the vital actions; and if heat cannot be transformed into any thing which is not heat, then Dr. Carpenter must further admit that the vital actions are *reciprocal* with antecedent oxydation. For, he points out distinctly the fact, that as heat, within certain limits, so vital action, but accounts for "the different behavior of the *living* and of the *dead* organism under the same conditions," by the hypothesis that the heat is *metamorphosed* by the living organism into vital force; but if heat cannot be metamorphosed into any thing not heat, then these conditions *must* occasion the oxydation of the living as well as of the living organism. But, if, according to Dr. Carpenter's hypothesis, the living organism converts heat into vital force and the dead organism does not, and if the "material substratum" determines the change, then primarily, according to *this* hypothesis, the difference is due to the material conditions. Now, if the external conditions of life produce oxydation in the living as well as in the dead organism, the difference in the ultimate results must be due to that difference of adjustment which is admitted upon the correlation hypothesis. And if, as heat, within certain limits, so life, if heat, unmetamorphosed, occasions oxydation, then as oxydation, within certain limits, so life.

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If we consider that the different kinds of *matter*, in the ordinary acceptation of the term, are not the only physical agents in nature, but that there are others, which may be called heat, light and electricity, having neither power to *originate* nor to *destroy* any thing *per se*, we may account for the *phenomena* of correlation, as we have seen, without assuming the metamorphosis of heat into something not heat:—As the power of the steam-engine is correlative with the power of steam, but is not steam metamorphosed into an engine moving power, so the phenomena of electricity are correlative with the phenomena of heat, but electricity is not transformed heat; so the phenomena of life are correlative with an antecedent, but they are not this antecedent transformed. If you take this view of the subject, and consider the cause of action an antecedent action, and the cause of the speciality of action adjustment, you may see, I think, the law of reciprocal action, or of correlation, if you please, in its more legitimate sense, from the simplest chemical action to the most complex organic phenomenon.

In the next article, we will consider muscular action and its conditions, in reference to the same point.

Article II.

The Causes of Hemorrhage from the Unimpregnated Uterus.

By M. M. Pallen, M. D., *Professor of Obstetrics, &c., in the St. Louis Medical College.*

I commence this paper by stating, that I do not expect to offer any thing new. I write it, because in the commencement of my medical career, I was too apt to overlook the causes of uterine hemorrhage, and because I fear that there are others who may fall into the same error. So much is said in the medical books, concerning idiopathic hemorrhage, either active or passive, that young practitioners when called to such cases, naturally enough, frequently neglect to ascertain the causes of the flow.

I do not pretend to assert that idiopathic hemorrhage from the uterus does never exist, but I affirm that it is not the con-

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dition, in the majority of cases, and I believe that it is so only in a very small proportion. I believe that in a large per centage of cases, there is a local cause for the bleeding, and it is the duty of the physician, if possible, to ascertain such cause.

Perhaps it would not be incorrect to assert, that there is really no idiopathic hemorrhage from the uterus—an active idiopathic hemorrhage is but an aggravation of the menstrual discharge. There is an active congestion of the organ—something more than the physiological congestion attendant on the menstrual flow—a condition akin to active inflammation—and the flow is the means nature adopts for the relief of the organ. The cause is the active congestion.

If the flow continues too long, the patient becomes anemic; or, in other words, the blood becomes too thin, and the uterine vascular tissue relaxed, and the result is a passive hemorrhage. Or the same condition of the fluids and solids may be produced by other exhausting discharges, and passive hemorrhage is the consequence. Here the cause is in the blood itself, and in the relaxed solids. But leaving the dispute about words out of the question, the facts are such, as I have represented them; and such conditions producing hemorrhages are called idiopathic hemorrhages. They occur, however, as I have stated, not near so often, as other causes which produce similar results. Let us then consider these causes. Hemorrhage from the unimpregnated uterus is sometimes the result of chronic inflammation of the lining membrane of that organ. Such a hemorrhage may commence at the usual menstrual period and continue for some days, or a week, or two weeks, or longer, beyond the usual period of menstruation. Then it will disappear and commence again at the next menstrual term. The intervals of non-appearance become less and less in duration, as time advances, until they totally vanish. The female looses blood all the time.

Sometimes the flow ceases, and commences at any uncertain time, so that the patient has no regular periods at all.

Another cause of uterine hemorrhage is, inflammation and ulceration of the neck of the womb. This has been repeatedly directed and repeatedly denied. Dr. West in his lectures has endeavored to prove that such lesions of the uterus have had

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an undue importance attached to them. To such a general proposition I assent. It is true of this local affection, as it is true of many other local affections. Stricture of the urethra is a grave malady—produces in very many cases much suffering and bad health. Yet I have never seen men in bad health, with slight stricture, who have been treated as if the stricture were the sole cause of the derangement of the system—whereas, if the stricture alone existed, the patients would get along with tolerable comfort, but unfortunately there were other sadder conditions over which bougies, or the knife, possessed no control whatsoever.

So it is with slight abrasions on the neck of the womb. They are but an unimportant part of the general ill health; and their cure will not do much to restore health to the patient.

But on the other hand, such lesions do produce serious disturbances, and among these are hemorrhages. I do not mean a slight inflammation and a slighter abrasion—I mean extensive disorganization—as when the epithelium is peeled off—the villi enlarged; so as to appear as if there were extensive granulations, the neck enlarged, and above all the os uteri patulent, and the lips exerted. The ulceration (I use the term for want of a better one) can then be perceived to extend into the neck of the womb. I have seen such cases attended with hemorrhage, (some of them of protracted date,) and I have found the hemorrhage to cease, when the neck of the womb was cured. This is, for me, sufficient evidence of the cause of the flow, notwithstanding the ingenious book of Dr. West.

Hemorrhage is sometimes the result of an enlargement of the neck and body of the uterus. These organs have been the seat of chronic inflammation, and examination detects an enlargement. I once had a patient, who had been the subject of hemorrhage for several months. She complained of the usual symptoms of uterine disease. I found the neck of the womb very much enlarged and somewhat indurated. She was directed to keep quiet, and I applied daily compound iodine ointment to the neck. In the course of three months, she was entirely restored to health. Of this mode of treatment I intend to say more in connection with tumors of the womb. At

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present, it is sufficient to refer to the above cause of hemorrhage.

Polypi of the womb have been long known as causes of hemorrhage—when the polypus is at the os uteri, or when it grows internally, and passes out of the os, it is early detected. But I fear that it occasionally happens, that an internal polypus, or a sub-mucous tumor exists, produces an exhausting hemorrhage, and is never suspected.

A lady told me that her sister died from a hemorrhage, which lasted a long time,—the cause of which was never ascertained during life. Examination after death revealed a small tumor projecting into the cavity of the womb.

The important question then arises, how are we to discover the existence of such tumors? I confess that it is sometimes very difficult. If the tumor be very large, examination through the rectum and the vagina may be sufficient. But if such be not the case, then the diagnosis is obscure. If we cannot ascribe the hemorrhage to any other cause, then the supposition might be very strong, that it arose from a tumor. The frequency of such growths would lead to such a surmise. Bayle has stated, and Dr. Lee agrees with him, that they exist in twenty out of a hundred middle-aged women.

It has recently been proposed by Dr. Barnes, of London, to dilate the os and cervix uteri with sponge tents, under such circumstances, with a view to explore the cavity with the uterine sound. If a tumor were projecting inwards, its prominency could be detected, in the same way as a stone in the bladder is found out by the surgeon. I can see no objection to this mode of procedure.

If the diagnosis be established, and a tumor ascertained, the next thing to be considered, is the treatment. I do not mean the mere palliative course, but a radical cure—if such can be affected. If the tumor belong to that class which are called polypi,—removal is the remedy. But if it be a tumor imbedded in the walls of the uterus, encroaching on the cavity of that organ, and pushing the lining membrane before it, or if it grow outwards, covered with the peritoneal membrane, this cannot be resorted to. (Perhaps I ought to say, to prevent misapprehension, that in this statement, I do not mean to in-

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clude those large growths which have been so successfully removed, by ventral incisions, by Dr. Atlee and others.)

These cases are certainly very difficult to be treated. At best, as a general rule, a palliative course is the only one that promises any beneficial result. Nevertheless, the hemorrhage is sometimes permanently arrested, by a plan which prevents the growth of the tumor, and by this means relieves the congestion of the lining membrane.

It was proposed, several years ago, by Dr. Ashwell, to treat such cases by the internal exhibition of iodine, and by the inunction of iodine ointment to the neck of the womb. He did not claim that the tumor could be removed by such means, but that it could be restrained from farther development, and even sensibly diminished. And he gave the history of several cases, in which such results had been accomplished.

From our present knowledge of the nature of these tumors, it is reasonable to expect a beneficial effect from the use of iodine. A recent work on Pathological Anatomy (Jones and Sieveking) states, that "the microscopic appearances of the fibroid tumor of the uterus are not in accordance with what we should expect to find in a true fibrous structure. * * * * *

It appears to us, that, from the analogy they present to the genuine uterine tissue, in the unimpregnated state, we should rather class them with homologous than heterologous productions; that they should be regarded rather in a relation to the womb analogous to that of exostosis to the matrix it springs from, than of a character totally at variance with that of their nidus."

And in a note to the above, the authors go on to say, "since the above was written, a corroboration of the view expressed has been published in the Report of the Pathological Society for 1853, p. 219. Dr. Bristowe, in an elaborate paper on the subject of fibrous tumors of the uterus, concludes, from his examinations of them in the impregnated and unimpregnated conditions, that all so-called fibrous tumors of the uterus, at least in their earlier stages, before degeneration has taken place in them, are essentially muscular tumors; not simply fibrous tumors, with a greater or less quantity of muscular fibre mix-

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ed up with them, but developments of true and undoubted muscular tissue."

Of the correctness of these views, there can be no doubt, I imagine. If then these tumors be nothing more than an abnormal growth of the uterine tissue, I can see no reason, why iodine should not exert over them the same influence as it does over an enlarged gland. It is no argument to assert that it has no effect over an hypertrophy of the heart—an organ somewhat similar in its structure to the womb—the causes which produce enlargement of the heart are constantly in action, and the effect is a necessary one.

At all events, I am prepared to assert, that iodine will arrest, occasionally, the nutrition of the uterine tumors, and thus prevent their further development. Now I am inclined to believe that it is during the period of their growth, that the hemorrhage takes place. We rarely find that flowing continues unabated for months at a time. Previous to the flow there are pain and heaviness in the uterine region, and this is followed by the eruption of blood; and, after a short time, the pain ceases. Doubtless, the tumor at that time takes on an increased action, blood is invited to the part, the lining membrane of the uterus, under which it lies, becomes highly congested, and the hemorrhage results from such congestion—or the tumor increases inside, presses on the membrane, and actually opens the orifices of the vessels, which have a peculiar valvular arrangement as they terminate on the internal surface. When the flow has existed for a time, the congestion is relieved and the hemorrhage ceases—or the membrane accommodates itself to the pressure, and the distended orifices return to their natural condition.

Hence, it is all-important to arrest this period of growth. This may sometimes be arrested by the timely application of a few leeches or cups, purgatives, and revulsives, when the symptoms indicate the commencement of the process. Nor are purgatives and revulsives to be neglected during any period, but the main treatment consists in the iodine. At the same time, I repeat, this as well as other means, will often disappoint us.

To illustrate its efficacy, however, I will mention two cases.

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The first one was unattended with hemorrhage, but the diminution of the tumor is worthy of record. About seven years ago, I was requested to see a lady, who told me that she believed that she was pregnant, as she was very much enlarged. She suffered with dragging pains in the lower part of the abdomen, and her health was impaired. She menstruated regularly. There was evidently an abdominal tumor—it was about the size of the head of a child about one year old—irregular in shape, and lying to the right of the median line. She said it was sometimes larger than at others, and then it was painful—as she was thin, I could readily feel it, through the abdominal walls. I told her that she was not pregnant, and put her on the use of the iodide of potassium, and ordered iodine ointment, to be rubbed freely on the abdomen. The treatment was persevered in for several months, as she perceived a gradual diminution of the tumor. It diminished to one-half of its size, and ceased to give her any uneasiness; she has at this time no inconvenience from it, and is free from the dragging pains, and the feeling of debility, which she had when I first saw her.

The second case, was one of a lady, who suffered from recurrent menorrhagia for several years previous to my seeing her. The flow came on after a period of two or three days of pain and uneasiness in the pelvic region. These would cease in about forty-eight hours after the commencement of the flow, which lasted from one to three weeks; she would then have a period of exemption, of variable duration. Her health was much impaired. When I first saw her, she was free from hemorrhage. Examining her in the erect posture, I could detect no cause for the flow. Three weeks after, she complained of pains in the pelvis, and after two days she commenced flowing. I now had her placed on her left side, and examined by the touch—I could distinctly feel an enlargement above the anterior segment of the cervix uteri. At first I was not certain as to its nature, but became afterwards convinced, that it was a fibroid tumor. As I examined her carefully at first, and could not discover any enlargement, but as I did discover it subsequently, at the commencement of the hemorrhage, the inference was, that it increased so much in

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size at that time, that it came readily within reach of the finger. Two weeks after when the flow ceased, the tumor again was not to be reached. The neck of the womb was higher up than during the flow. That these tumors do increase in size at certain times, and become painful, I have oftentimes remarked, as well in cases unattended with hemorrhage, as in those with hemorrhage.

The lady was confined to the recumbent posture during the flow, and injections of alum dissolved in water, were daily thrown in the vagina; the bowels were kept soluble. After the cessation of the discharge I applied daily, through a tubular speculum, the compound iodine ointment to the neck of the womb. Iodide of potassium was given internally, twice a day. In three weeks the flow returned and lasted two days—re-appeared in a week and lasted ten days. She now had no flow for six weeks—then it appeared and remained one week. After this the return was after an interval of twenty-four days, and it continued for a few days. From this period her menstrual periods were regular, but the flow was too abundant twice—it then became natural. I examined at the commencement of each flow, and could perceive that the tumor was gradually getting less; and it could be detected only by the most careful examination when I last performed the operation. She has continued in good health ever since.

Now, it is true, that the tumor has not totally disappeared, its farther development has been prevented by the plan pursued.

o be Continued.]

Article III.

On the Sedative Effects of Veratrum Viride. J. R. Murphy, M. D., *Chesterfield, Illinois.*

Dr. McPheeters,

Dear Sir,—At the request of my son, who attended your lectures last winter, I send you a rough outline of several cases which have come under my care, and in which I used the veratrum viride as a sedative with the most prompt and deci-

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ded effect. I may remark, that from my experience with this remedy I have the most unbounded confidence in it, in all proper cases.

1st. *Pleuropneumonia.*—On the 24th of April last, I was called to see Mrs. M. S., aged 26, who, three days before, had been caught in a shower of rain while walking very fast, in order to avoid the storm. Found her complaining of a tightness across the chest, together with fulness about the stomach, breathing short and difficult, and attended with considerable pain, cheeks flushed and of a dark red color, bowels constipated, pulse 123 to the minute. Bled her until she could take a full breath without causing pain, and gave her a full dose of calomel, ipecac and morphia, to be followed in four hours with a dose of oil, and also applied a large blister on the region of pain.

25th. Medicine has acted four or five times, giving rise to large and very offensive operations—feverish, with a pulse of 126, and circumscribed scarlet blotches on the cheeks. Gave her six drops of the tincture of veratrum viride—to be repeated every three hours, and directing the dose to be increased one drop each time until nausea should be induced, or the pulse reduced to 75 beats to the minute.

Shortly after taking the third dose, she was seen by my son, who found her pulse reduced to 60, with profuse perspiration, accompanied by nausea and vomiting. He gave her brandy and morphia, which promptly relieved the sickness at stomach and vomiting, and then ordered four drops of the veratrum, to be given every three hours, in order to keep up the impression.

26th. Found her quite cheerful, free from fever and pain, but very weak; continued the veratrum, and ordered her a laxative, which operated twice during the afternoon. During the night she rested well, in consequence of which, the medicine was neglected.

27th. Has had no medicine for twelve hours—feverish, pulse 130 and irregular. Gave her six drops of the veratrum, and at the end of three hours, seven drops more—which brought her pulse down to between 55 and 58, and caused nausea.

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Reduced the dose to three drops every three hours, and ordered it continued until otherwise directed.

28th. Found her free from fever, pulse 70 and soft, and with a desire for food. Treatment continued.

29th. Improving rapidly, has a fine appetite and complains of not getting enough to eat. In a few days she was able to be up and at her work.

2d. *Puerperal Fever.*—I have used the veratrum viride in three cases of puerperal fever, after bleeding and purging, with the happiest effect. In one of these cases, after the usual remedies had been promptly tried, but without any apparent benefit, I put the patient on seven drop doses of this remedy, to be increased one drop every three hours. After taking the second dose, her pulse was reduced from 140 to below 60, accompanied with a pallid countenance, profuse perspiration and violent sickness and vomiting. Her friends becoming alarmed at her appearance, refused to give the medicine as directed, and I found her the next day with a pulse so frequent that I could not count it accurately. I then told her husband that except the remedy was applied regularly, his wife would die, whereupon he reluctantly consented to give it. Again after the second dose of five drops, her pulse was brought down to 70, at which point I kept it by giving doses of two or three drops, every three hours, for several days. Her convalescence was however very slow, as it was more than three weeks before she was able to be up.

I have also tried this remedy in two cases of inflammation of the brain, with bad effect. In one of the cases as soon as the sedative effect was produced, violent convulsions supervened. This I relieved with brandy and morphia, combined with powerful rubefacients externally. It was, however, a long time before the mind assumed a healthy tone—perhaps three months.

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PART II.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

Article I.

The Pathology and Treatment of Lucorrhœa. By W. Tyler Smith, M. D., *Member of the Royal College of Physicians; Physician accoucheur to St. Mary's Hospital; Lecturer on Midwifery and the Diseases of Women in St. Mary's Hospital Medical School, &c. Philadelphia: Blanchard & Lea*—1855, *pp.* 199.

In this work, Dr. W. T. Smith uses the term lucorrhœa, in somewhat of a generic sense, as conveniently grouping together a large number of disorders, of which it is the most common and prominent symptom. At the same time, however, he distinctly recognizes the fact that it is only a *symptom*, and that too of different and sometimes opposite conditions of the uterus and vagina.

"If" he remarks, "we consider lucorrhœa generally, as a distinct disorder, and treat it as such, the result is certainly mischievous. But if we partially or entirely ignore the discharges, and, referring to them as little as possible, use the words inflammation, ulceration, hypertrophy, and other allied terms, we make no real advance, but merely shift from one set of prominent symptoms to another."

If therefore we regard the lucorrhœa discharge, in its true light, as a symptom of different pathological states of the vagina and uterus, and yet as something more than a mere symptom, there can be no impropriety in the use of the term in the enlarged sense in which our author has employed it. And it must be admitted too, that he has selected a most interesting and important class of diseases for elucidation, and respecting the pathology and treatment of which, there is still

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great contrariety of opinion among medical men, notwithstanding all that has been written on the subject, and the light that has been shed on them by the speculum.

The work is divided into twelve chapters. The first of which is devoted to the minute anatomy of the vagina and the os and servix uteri, in which the aid of the microscope is invoked, and the results pictured in well executed wood engravings.

The vaginal canal is formed of an external contractile sheath, a middle erectile layer, and an internal mucous or cutaneous lining." "The mucous membrane," he says, "is studded with large papillæ, or villi, which are very numerous in the lower part of the canal, but diminish in number on passing upwards towards the os uteri. At the entrance of the vagina these papillæ are large and club shaped, and they are frequently double, or even treble, at their extremities, two or three of them appearing to grow from a single stock." * * *

"At the vulva there is a large supply of sebaccous follicles, and just within the entrance of the vagina, particularly in the vicinity of the meatus urinarius, there are numerous mucous glands, the orifices of which are frequently large enough to be seen by the naked eye." * * * "Occasionally these glands are so much enlarged or distended with fluid from the obstruction of their ducts, or by suppuration, as to diminish the outlet of the vagina." Contrary to the teachings of most anatomists, the mucous follicles and glands he found to be more numerous at the lower part of the vagina, and to diminish to such an extent on ascending as to be very scanty as the mucous membrane approaches the cervix uteri. "Thus it would seem, looking at the glandular elements of the canal, that it is not from the upper, but from the lower part of the vagina, that mucous discharges might be expected."

Next is given the minute anatomy of the os and cervix uteri, which so far as lucorrhœa is concerned is more important than that of the vagina, but the details of which our space will not permit us to enter.

The second and third chapters treat of the glandular structure of the canal of the cervix uteri, and of the secretions from the vagina, and of the os and cervix uteri, in the healthy state.

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Chapters four and five, are devoted to the different forms of lucorrhœa, and its sequelæ—inflammation, abortion, ulceration, &c. The sixth, traces the relation between secondary syphilis and lucorrhœa; and the seventh, of the relations of vaginal or epithelial lucorrhœa to gonorrhœa in the female; to urethritis in the male; and to the opthalmia of new born infants.

Chapter eighth is devoted to the anatomy and physiology of the ovula nabothi. The ninth and tenth treat of the relations of lucorrhœa to disorders of the functions of menstruation, and to sterility and abortion.

Chapter eleventh is on the constitutional and local causes of lucorrhœa,—while the twelfth, embracing twenty-three pages, is on the treatment of lucorrhœa.

Under this latter head our author remarks: "In the treatment of lucorrhœa, undue prominence must not be given either to constitutional or local treatment. There are cases in which constitutional measures will alone arrest lucorrhœa; there are others in which local treatment is sufficient without the adoption of general measures. But in the great majority of cases, constitutional and local measures are both required, for any thing like a permanent cure of the disorder. If we depend either upon local or constitutional measures exclusively, we shall find the discharge recur again and again, after its apparent removal. The general principle of treatment must be the arrest of the discharge, the removal of the local disorder upon which the discharge depends, and the relief of any constitutional disorder with which the lucorrhœa may be connected, either as cause or effect."

Many valuable suggestions are to be found in this chapter, and particularly in reference to the local treatment by the use of caustics, &c.; but for these and other details which we have intentionally omitted, we must refer our readers to the work isself, assuring them at the same time that it will richly repay a perusal.

To be had at Edwards & Bushnell, on Fourth street.

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ARTICLE II.

A Practical Treatise on the Diseases, Injuries and Malformations of the Urinary Bladder, the Prostate Gland, and the Urethra. By S. D. GROSS, M. D., *Professor of Surgery in the University of Louisville; one of the Surgeons to the Louisville Marine Hospital; Member of the American Philosophical Society; author of Elements of Pathological Anatomy; A Treatise on Foreign Bodies in the Air-Passages, &c. Second Edition, revised and much enlarged, with one hundred and eighty-four illustrations—pp.* 925. *Philadelphia: Blanchard & Lea*—1855.

Four years ago, when this valuable work of Professor Gross first made its appearance, we had occasion to notice it in terms of high commendation, and we now take pleasure in announcing a second edition, as it affords unmistakeable evidence of the favorable reception with which it has been greeted by the profession.

The present edition, the author informs us, "has been thoroughly revised, and "augmented by upwards of two hundred pages, and by seventy-eight illustrations. The additions are dispersed throughout the work in the form of new paragraphs, sections, and chapters, which impart to it somewhat of the aspect of a new treatise."

In the appendix is given "a chapter on the Prevalence of Calculus Diseases in the United States and Canada, constituting, it is believed, the first attempt that has ever been made to collect and systematize our information upon this subject." This is undoubtedly a valuable addition, and cannot fail to enhance the reputation of the work, which is already recognized as the standard authority on the important and interesting class of diseases which it is designed to elucidate. It should be in the library of every surgeon.

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Article III.

Clinical Lectures on Paralysis, Diseases of the Brain, and other Affections of the Nervous System. By Robert Bentley Todd, M. D., F. R. S., *Physician to King's College Hospital. Philadelphia: Lindsay & Blakiston—pp.* 311—1855.

The several lectures (twenty in all) composing this volume, were originally delivered by the distinguished author in the course of his clinical service in King's College Hospital, and portions of them have, from time to time, been published by the English press, and extensively read and highly esteemed by the profession on this side of the Atlantic. Others of them now appear for the first time. The high character and acknowledged abilility of the author as a faithful and astute clinical observer, and sound pathologist, cannot fail to give these lectures currency.

The work does not pretend to cover the whole ground, nor to present a complete and systematic course on diseases of the nervous system, but merely treat of certain nervous affections which presented themselves and were illustrated by cases which occurred in the wards of King's College Hospital. The number of cases cited, with their *post mortem* appearances are large, and many of them fraught with peculiar interest, and herein consists one of the chief excellencies of the work.

The first chapter is occupied with some general observations on paralysis, pointing out its nature, (being a symptom not an essential disease,) the various causes which give rise to it, &c., together with cases by way of illustration. Then follows a description of the various forms and degrees of paralysis, occupying some fifteen lectures. The remaining five are devoted to cases of epileptic coma and lead palsy; cases of syphilitic diseases of the dura mater and periostitis; case of acute idiopathic trismus, &c.; chorea, and local hysteria and calalepsy.

The work is written in good English, and in a familiar and agreeable style, and altogether forms a most interesting and valuable treatise.

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ARTICLE IV.

History of the American Medical Association, from its organization up to January, 1855. By N. S. DAVIS, M. D., *Professor of Principles and Practice of Medicine and Clinical Medicine in Rush Medical College, &c. To which is appended Bibliographical Notices, with portraits of the Presidents of the Association, and of the author. Edited by* S. W. BUTLER, M. D. *Philadelphia: Lippincott, Grambo & Co.*—1855—*pp.* 191.

The series of articles, making up the history of the American Medical Association, were originally prepared by the author for the pages of the New Jersey Medical Reporter, in which journal they have regularly appeared during the last two years. The object of Dr. Butler, the enterprising and able editor of the aforesaid journal, in collecting and presenting them in the form of a separate volume, is to interest, if possible, "the mass of the profession in one of the most important social organizations that exists in our land." We sincerely hope that the work may have the desired effect; for we cannot but regard the formation of the Association as the commencement of a new and all-important era in the history of American medicine, and which we believe is yet destined to confer a lasting benefit on our profession, as well as to elevate the scientific character of our country.

The selection of Dr. Davis as the historiographer in this instance is certainly appropriate, as he was unquestionably the originator of the movement which resulted in the formation of the Association.

Our readers are too familiar with the facts connected with this history to render it necessary for us to detail them here, the work, however, is fraught with interest and should be in the possession of every physician.

The volume is handsomely embellished with life-like and well executed portraits of the various presidents of the association, and of the author, Dr. Davis; and in the appendix is given a short biographical sketch of each of these worthies. Our readers will be pleased to learn, that among others there is a portrait and sketch of the life of our accomplished fellow-citizen, Dr. Charles A. Pope.

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PART III.

RECORD OF MEDICAL SCIENCE.

Abstract of the Report of the Committee of the Academy of Medicine (New York) on Catheterization of the Air-Passages.

This committee was appointed to report upon a paper read before the Academy of Medicine, by Dr. Horace Green, "*On the Employment of Injections into the Bronchial Tubes, and into Tubercular Cavities of the Lungs.*" The committee consisted of Prof. Willard Parker. *Chairman*, Drs. Alex. H. Stevens, Isaac Wood, J. Anderson, J. T. Metcalf, B. F. Barker, and John O. Stone. The following is an abstract of the majority report.

The committee met on five different occasions. At these different meetings thirty-eight patients in the aggregate, were submitted by Dr. Green and others to the test of the operation of passing instruments into the air-passages, and three, of the injection of nitrate of silver into these passages.

I. *As to the Practicability of the Operation of passing Instruments into the Air-Passages.*

This division of the Report was considered under the following heads:—

1. *History of the Catheterism of the Air-Passages.*—The introduction of tubes into the air-passage is not a recent operation. It was recommended by Hippocrates, and seems to have been long practiced in preference to bronchotomy. Desault, among modern writers, also recommended it strongly. Mr. Ryland, in his treatise on *Diseases of the Larynx*, devotes a short section to this operation. Other authors allude to it as a matter of history.

2. *Results of Experiments.*—The results of experiments confirm the records of history, as to the practicability of the operation of catheterizing the air-passages. In eleven cases it was performed to their entire satisfaction. The evidences on which they rely as proofs of its success, are:—

1. *The detection of the tube in the cavity of the larynx by the finger passed into the mouth.*—This was done by several of the

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committee, and was demonstrative of the position of the tube in relation to the laryngeal openings.

2. *The symptoms manifested by the patient.*—The symptoms which distinguish the passage of an instrument into the trachea and œsaphagus, may be thus contrasted :—

TRACHEA.	ŒSOPHAGUS.
1. Suffusion of the face, rapidly increasing to turgescence and lividity.	1. Suffusion of the face slight, rapidly subsiding with cessation of retching and vomiting.
2. Great anxiety and alarm; not easily pacified.	2. Little anxiety, easily pacified.
3. Eyes wild, staring, overflowing with tears.	3. Eyes natural; slight suffusion from tears.
4. Cough violent and spasmodic.	4. Little or no cough.
5. Respiration greatly disturbed; inspiration loud, hoarse, and croupy; expiration attended with violent cough, ejection of bronchial mucus through the tube, and finally full breathing through the instrument.	5. Respiration little, if at all disturbed; occasional puffs of air through the tube.
6. Voice extinguished, a hoarse whisper, interpreted with difficulty.	6. Voice distinct; often quite natural.
7. Retching slight.	7. Retching and vomiting a common symptom.

So prominent and characteristic are the symptoms which the patient manifests on the successful introduction of the instrument into the air-passages, and so strikingly do they contrast with those witnessed when it enters the œsophagus, that the committee came to regard the rational signs as the surest criterion of the success of the operation. In but a single instance did they fail of being exhibited with characteristic intensity. In this case the patient had suffered from a syphilitic ulceration of the air-passages, and to this circumstance, together with his enfeebled condition, was attributed the absence of the severe symptoms. Dyspnœa and lividity of the face were the only evidences of the success of the operation. They therefore establish it as a rule, to which ordinarily there is no exception, that the rational signs above tabulated will differentially distinguish the course which the instrument takes, whether into the laryngeal or œsophageal passages.

Other tests were employed, but none of them were found, on trial, free from objection.

The power of the patient to blow out a lighted candle, and to collapse and inflate, at will, in respiration, a bladder attached to its free extremity through the tube, has been much relied upon as a proof that the tube had entered the trachea. But it was found that when the tube was purposely passed

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into the œsophagus, this power was still retained, though in a much less degree.

The passage of two sponge-armed probangs into the throat, and by the withdrawal of the lower one, calculating the position of the other, whether in the œsophagus or trachea, did not, as far as experimented with, yield satisfactory results. For it was not proved to the satisfaction of the committee that the sponge-probang entered the larynx and trachea.

The sensations of the patient are reliable only when the tube has been repeatedly passed both into the trachea and œsophagus. In these cases patients have very promptly and correctly decided which passage the instrument was entering. The fact was strikingly illustrated in Mary Norton, on whom the operation was repeatedly performed before she was brought before the committee. On the first and second trials of the introduction of the tube by Dr. Green, she shook her head, indicating that it had not entered the larynx. The operator, however, was satisfied on the last trial that the tube had penetrated the trachea, and that the sensations of the patient were not to be relied on, when she ejected a portion of the contents of the stomach through the tube, and thus demonstrated not only the position of the instrument, but equally the correctness of her sensation.

It appeared very evident, also, in the course of these experiments, that the opinion of the operator, as to the course which the instrument takes, is unreliable, when he trusts to his own senses, and disregards symptoms. They witnessed in two cases the fallacy of Dr. Green's opinion, as to the success of his experiment, though based upon so large an experience. In both instances, while positive that he had successfully passed the instrument into the trachea, the patient vomited through the tube, and thus demonstrated his error.

II. *Facility of the Operation.*—While these experiments proved conclusively to the minds of the committee, the practicability of passing tubes into the air-passages, they also afforded opportunities of witnessing the facility with which the operation is performed under different circumstances, and with different instruments. These were as follows:—

1. *Previous Preparation of the Patient.*—It is contended that the facility with which the instrument is introduced depends much upon the previous preparation of the patient, by frequent application of the nitrate of silver to the upper part of the larynx. To obviate this objection, the committee met twice at Dr. Green's office to witness the experiment upon patients whom he was treating with local applications to these parts, and at the second visit at Bellevue Hospital, the patients

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were selected from a class which had been expressly prepared for the experiment, by the application of caustic to the throat from three to five times during the preceding week.

The results of these experiments, however, do not sustain the above assertion. The patients on whom Dr. Green had been operating for six months, more or less, were as intolerant of the actual passage of the tube into the trachea as those first submitted to trial. The case of Mary Norton was adduced. Although the tube in her case had been passed into the trachea half-a-dozen times previously to her coming before the committee, still she exhibited in the most marked manner all the evidences characteristic of the introduction of a foreign body into the air-passages, when the tube was successfully passed.

2. *Instruments Employed.*—The facility with which catheterism of the air-passages is performed seems to depend in a great degree upon the instruments used. Those employed in these experiments were: 1. A tube, consisting of Hutching's catheter No. 10, with a wire stilet, and bent with a curvature corresponding to a circle of six inches in diameter. 2. A tube of the same size, slightly bent at its extremity. This was the instrument selected by Dr. Green, and is the one which he is accustomed to use in practice. 3. A sponge-armed probang, the sponge having a diameter of one-half to three-quarters of an inch. The result of the experiments with these several instruments was as follows :—

	No. of Trials.	*Failed.*	*Succeeded.*	*Per Cent. Failures.*
Tube with large curve,	19	8	11	about 28
Tube with small curve,	37	34	3	" 92
Sponge-probang,	18	18	0	" 100

From these experiments it appears that the instrument best adapted to succeed in catheterism of the air-passages, is a tube having a large curve, or one shaped like a common catheter; while that least adapted to enter the trachea is the sponge-armed probang.

1. *The Tube with a Large Curve.*—This instrument was introduced into the trachea eleven times to the entire satisfaction of the committee. The fact that the operators were successful eleven times in nineteen trials, proves that this tube can be introduced with considerable certainty into the air-passage.

2. *The Tube with a Small Curve.*—This is the instrument selected by Dr. Green for catheterization of the air-passages, and is that which he uses in practice. In these experiments he was the only one who employed it, and the result shows

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that even in the hands of the most skilful practitioner, it failed of entering the air-passages in about 92 per cent. of trials.

3. *The Sponge-Probang.*—This instrument afforded the least satisfactory results of any used. Notwithstanding the most persevering efforts with the whalebone slightly bent, as used by Dr. Green, and with patients who quietly submitted to the test of experiment, the results were entirely negative. In no instance did it satisfactorily enter the trachea. In two instances, with the whalebone curved like a common catheter, the sponge was thought to have entered the larynx; but with repeated efforts it could not be passed between and beyond the vocal chords. The suffocation was so great each time as to compel a withdrawal of the instrument.

III. *The Utility of Injections into Tubercular Cavities of the Lungs.*—This portion of the report was brief. As the committee had no evidence that injections could be thrown into tubercular cavities of the lungs, they refused to discuss, on merely theoretical grounds, the question of their utility. One of the three cases injected with nitrate of silver, died within twenty-four hours after the operation, not having recovered from its immediate effects. A letter was read from the physician who made the autopsy, describing the condition of the air-passages. The mucous membrane had the appearance of a recent application of the caustic.

Conclusions.—1. Catheterism of the air-passages dates its history from the time of Hippocrates.

2. The best evidences of the successful passage of an instrument into the air-passages, are the rational signs.

3. The facility of the operation depends upon the kind of instrument used—the tube having a large curve being best, and the sponge-probang least adapted to enter the trachea.

4. That there is no reliable evidence, in the opinion of the committee, that the sponge.probang has been passed through and beyond the vocal chords.

5. That there is no sure evidence that an instrument can be passed *at will* into the right or left bronchial divisions.

6. That in the great majority of instances where injections rae supposed to have been thrown into the lungs through a tube, they have passed directly into the stomach.

7. That as regards the utility of injections of nitrate of silver into the lungs, the facts thus far developed in the experiment of the committee, lead them to regard the operation as one fraught with danger as well as difficult.

This report was signed by Prof. Parker, chairman, Drs. Wood, Metcalf, and Stone; Dr. Anderson subscribed to all but that bearing upon the utility of injections; this he did not think

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sufficiently investigated; Dr. Stevens, who witnessed but a few experiments, made a short report. Prof. Barker made a lengthy minority report.—*Western Lancet.*

On the Treatment of Mammary Inflammation and Abscess. By O. C. Gibbs, M. D.

Inflammation of the female breast, terminating often in abscess of a more or less troublesome character, is an affection so common after pregnancy, as to be familiar to every practitioner. The irritation and congestion which accompany and succeed the secretion of milk, often exceed the healthy standard, particularly after deliveries with first children; the breasts become hot, tense, and painful, to which symptoms inflammation and abscess frequently succeed. When, in case of absence of the nipple or from any other cause, the breasts are but imperfectly unloaded, mammary inflammation is a common sequence. When the nipples become sore, and consequently nursing extremely painful, milk is often allowed to accumulate in the breasts, until a troublesome and painful train of symptoms has been commenced, too often leading to the disease under consideration. Mammary abscess is doubtless more common in cities than in the country. Many mothers, filled with false and nonsensical notions of propriety, refuse to perform the pleasurable and sacred duty of nursing their offspring; and this foolish disregard of a natural obligation and a holy instinct, frequently entails upon the perpetrator the above mentioned affection of the breast, accompanied with no small amount of suffering and pain, and sometimes death.

The suffering and constitutional disturbance, which accompanies inflammation and abscess of the female breast, is by no means inconsiderable. But few organs are subject to disease more troublesome, pain more excruciating. Many women, suffer more from diseases of the breast, after confinement, than even during parturition. If the suffering is not as severe, it is more enduring; productive, ordinarily, of more constitutional disturbance, and often more destructive to life. In view of these facts, mammary inflammation is worthy, at the hands of physicians, of the highest consideration, and the utmost therapeutic skill.

Of the causes and symptoms of the disease under consideration, we do not propose here to speak; they are sufficiently familiar to every practitioner. Suffice it to say here, that inflammation and abscess of the female breast, is by no means a disease peculiar to the early period of nursing. The worst

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case of mammary abscess, that ever came under our observation, occurred in a pregnant female, several weeks previous to confinement. Another case of inflammation of both breasts, and abscess in one, that has come under our observation, came on at the time of weaning, after fifteen months of continuous nursing.

In the *treatment* of inflammation of the breast, a great variety of plans and remedies have at different times and by different persons been proposed. It is evident that the treatment must vary with the indications to be fulfilled by the administration of remedies, and the indications are three-fold. *First*, to prevent inflammation; *second*, when inflammation of the gland is present, to effect resolution; and *third*, when suppuration cannot be prevented, or has already taken place, to promote the rapid cure of the abscess.

1st. In preventing inflammation; simultaneous with the secretion of milk, its abstraction should be commenced, and in no case should the breasts be allowed to become much distended by retained secretion. The most natural way of accomplishing this, is by nursing the new-born child. But, in cases where the offspring is still-born, or in cases where nursing is considered, from good reasons, injudicious, the breasts must be emptied by artificial means. Whatever means be employed, the evacuation should be so perfectly performed, as to prevent any considerable distension of the mammary glands. In cases of absent nipple, a false one should be substituted. These nursing attentions, always judicious and appropriate, will but seldom fail in preventing the disease. But, in case these means are neglected or prove insufficient, and the irritation and congestion of the gland exceed the healthy standard, and pain and feverishness supervene, cooling diaphoretics and saline laxatives, should be administered, unless counter-indicated by other symptoms, and the breasts should perseveringly be kept emptied of the milk secretion, as directed above.

2d. When, from any cause, inflammation of the gland is absolutely present, the treatment detailed under the first indication is equally appropriate. And in addition, we have found nothing so efficacious as the local application of *iodine*. We do not now remember of making application of this remedy early, or before suppuration was absolutely and immediately threatened, but that resolution was accomplished without the formation of pus. This local remedy is not original with us, and we do not now know to whom we are indebted for the idea. If, in subsequent cases and in other hands, the remedy should prove as efficacious as in previous trials, it will most certainly be a most desirable therapeutic acquisition, in

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the treatment of mammary inflammation. We have thus far made the application in the form of tincture twice a day. We advise the whole inflamed surface, to be penciled with the tincture and then covered with oiled silk. Perhaps the iodine ointment would be preferable, but we have so far been so well satisfied with the tincture, as to be reluctant to make a change.

3d. If from the negect or insufficiency of the above mentioned treatment, suppuration should be unavoidable, poultices should be employed, and when established, the pus should be thoroughly evacuated. The abscess should never be allowed to break of itself, for, in this event, pus is apt to burrow in the glandular structure of the organ, sinuses to form, extending the boundaries of the disease, until the constitution severely suffers from the extent of the suppurating surface. So soon as matter is detected, the breast should be opened sufficiently free to effect its complete evacuation. From a neglect of this direction, suffering is often very much enhanced, and the duration of the disease very much protracted. After the pus is evacuated, the breast should be thoroughly compressed, by the means of adhesive straps, so as to bring the walls of the abscess into coaptition, prevent the retention of pus, and facilitate the occlusion of the cavity. These directions are of paramount importance. If early opening and proper compression were universally resorted to, we are of the opinion that bad and protracted cases of mammary abscess would be extremely uncommon.

When sinuses do form, they should also be freely opened, and, in the event of the abscess failing to speedily heal, the cavity should be injected with a solution of iodine, of appropriate strength, in connection with compression.

Beef-tea and tonics should be employed, when the suppuration is considerable, depressing materially the powers of the system.

By faithfully fulfilling the first indication, very many cases of mammary inflammation may be prevented; by fulfilling the second, abscess of the breast may be rendered less frequent; and by attending to the third, much of suffering may be prevented and convalescence earlier established.

[*Western Lancet.*

Cod-liver Oil with Quina.—The London Lancet says, Mr. Bastick gives the following account of his mode of preparing this medicine:—The oleum morrhuæ cum quina is simply a perfect solution of quinine in cod-liver oil. The quantity of quinine may be varied according to the wish of the prescriber,

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although it is generally employed in the proportion of two grains to each ounce of the oil. This preparation is best made in the following manner: The requisite quantity of bisulphate of quinine is dissolved in distilled water, with the aid of a little dilute sulphuric acid. The quinine is precipitated from its solution by means of an alkaline carbonate; the precipitate is treated with boiling alcohol; the resulting alcoholic solution, after being filtered, is evaporated to dryness. The residue, which is pure quinine, is then added to the cod-liver oil, and the mixture is heated in a water-bath until solution is completely effected, which is known by the oil becoming perfectly transparent.

Palliative in Whooping-Cough.—Dr. John G. Johnson, of Lockington, Ohio, in a communication to the Medical Counsellor states, that he has used with the most decided benefit (in whooping-cough) the prescription recommended by Dr. Murray of this city, and published in the April number of this Journal, for 1848. The prescription is as follows: Potassa Iodide, gr. vi; Mucilage Accacia, ℥ vii; Syrup Senega, ℥ i; Tincture Lobelia, ℥ i, mixed; of which a teaspoonful four times a day may be given to a child two years old. "I was more than pleased," he says, "to see its great control over the spasmodic cough." This, we have no doubt is a useful mixture in this troublesome disease, though we should think that the proportion might be varied with advantage and the quantity of the Iodide increased.

Heavy Damages for Slander of a Physician.—Dr. O'Neal, of Baltimore, has recently obtained a verdict against a Mr. Jeffries, to the amount of $10,000 for a libel against his professional character. The facts are these. A year ago last July, Jeffries met with a severe railroad accident, by which both legs were fractured, as asserted by Dr. O'Neal, who treated him accordingly. Some six or eight weeks afterwards the patient became dissatisfied, dismissed the Doctor and contended that the bones had not been fractured, and even went so far as to publish a card in the papers, charging the doctor with ignorance in not discovering that the limbs were not fractured, and for dishonestly pretending that they were. This was the ground of the libel and for which the jury, after a long trial, and thorough investigation, awarded the above damages.

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On the Ophthalmoscope.—Dr. J. H. Dix, of Boston, presented to the Suffolk District Medical Society, at its last meeting, the ophthalmoscope of Helmholtz, as improved by Coccius, and explained the method of using it for the exploration of the textures of the globe of the eye posterior to the iris. He spoke of it as an instrument destined perhaps hereafter to throw some light upon the pathology of these textures. He considers it to be an instrument capable of great harm when injudiciously used. Pain may be induced in an eye, the vision of which is wholly extinct, by exposure to it for four or five minutes, a longer period than which should never be occupied in one examination. The greatest and probably the only practical advantage at present attainable by the instrument, is the sparing of the patient a useless and harassing treatment in some cases of amaurosis, of which the ophthalmoscope may demonstrate the cause to be irremediable organic change of texture of the retina. In reply to a question by Dr. Durkee, Dr. Dix said that for a full examination of the internal texture of the eye it is necessary to dilate the pupil previously, those cases only excepted in which the crystalline is wanting.

[*Boston Med. & Surg. Journal.*

Chloroform in Lead Poisoning. By M. Aran.—This remedy is recommended by M. Aran, physician to the *Hôpital St. Antoine*, in Paris. He has just published a somewhat lengthy paper on its use, in which he gives some very interesting illustrative cases. One of these occurred in a house painter, æt. 31, who was affected with lead colic for the second time, after having followed his trade for twenty years. There was obstinate constipation, bilious vomiting, pain in the epigastrium, tormina, scanty urine, and a very slow pulse—only 48. A compress, on which nearly a drachm of chloroform had been poured, was placed on the umbilical region, and retained there for several minutes. In spite of the sensation of heat and burning occasioned, immediate relief was experienced by the patient. In addition to this a sulphurous bath was ordered; a mixture containing 80 drops of chloroform was administered; and a domestic enema was prescribed, to be followed by a small clyster, with 20 drops of the anæsthetic in it. This treatment was continued for a week with great benefit, the chloroform being given morning and evening; and 16 days after admission the patient was discharged cured. Rather an interesting incident occurred in this man's case: he swallowed one day, by mistake, nearly an ounce (30 grammes) of chloroform. Symptoms of narcotic poisoning appeared, but the patient re-

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covered satisfactorily. Several other cases are given in which the same treatment proved very efficacious.

M. Aran says that the compress saturated with the chloroform should be covered with dry compresses, and that it should be allowed to remain in contact with the skin from two to five minutes. After the preliminary large doses, the following mixture should be used: ℞. Chloroformi, gtt. 20-50; gum tragacanth, ʒj; syr. simplic., ʒj; aquæ, ʒiij :—misce. Dose, a teaspoonful frequently. He gives the following formula for the chloroform enema: ℞. Chloroformi, gtt. 20-50; gum tragacanth, ʒij; ov. vitelli., j; aquæ, ʒiv :—misce. The patient should be desired to retain these enema as long as possible.

[*L'Union Medicale.*

On the Histology of the Blood in the Insane. By Dr. Lindsay.

The author founds his remarks on the result of a microscopical examination of the blood in 236 insane patients in the Crichton Royal Institution, and Southern Counties Asylum, at Dumfries, and carefully compared with blood taken from thirty-six officers and attendants of these institutions. The blood examined was invariably taken from the fingers by the prick of a needle.

Dr. Lindsay found sometimes great difficulty in getting the consent of these unfortunates to his experiments. Many seemed to think that some conspiracy against their lives was lurking under the operation; some declined being made subjects of experiment or amusement, whilst others declared that in their debilitated condition the abstraction of one drop of blood would be inevitably fatal. There was much less resistance among the educated classes than with the rough and hardy artizan and field laborer; whilst the female patients were always more eager for the experiment than the other sex, which our author attributes to the greater curiosity on the part of the ladies to find out what was to be done.

The following is a *resumé* of the chief general conclusions or results drawn by Dr. Lindsay from his observations:

1. That the blood of the insane varies considerably in—*a.* color, granularity, and dullness; *b.* density or consistence; *c.* coagulability; *d.* relative proportion of serum, fibrin, and globules; *e.* the tendency of the red discs to agglomerate; *f.* rapidity, readiness, and amount of the flow.

2. That the *red discs* vary in *a.* size, *b.* form, *c.* color, *d.* number, *e.* tendency to agglomerate.

3. That the *white globules* vary in *a.* size, *b.* form, *c.* granularity, *d.* number, *e.* reaction of acetic acid.

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4. That in the blood of the insane a *leucocythemic condition* frequently exists.

5. That in many cases this condition may be more apparent than real, and due to a *deficiency in the amount of red dics.*

6. That there is no fixed relation between the kind or intensity of the above conditions, and the various forms or phases of mental alienation.

7. That there is, however, a certain relation between these conditions and the physical complications of mental alienation.

8. That these conditions are not peculiar to the insane, but occur in the sane under similar circumstances of physical disease.

9. That the blood is more altered in the insane than the sane, chiefly in proportion as anæmia, struma, and other physical states, are more common in them.

10. That, contrasting the condition of the blood in the rich insane with that in the poor insane, it is deteriorated more frequently and to a much greater extent than the former.

11. That this is due, in great measure, to the essential difference in the education and habits in the respective classes; to the predominance of mental over physical culture in the higher classes; and to the predominance of physical over mental exercise in the laboring classes.

12. That, contrasting the condition of the blood in various forms of mental alienation, no alterations can be considered peculiar to, or frequent in, any one of these forms.

13. That, contrasting the blood of the insane with that of the sane, any structural alteration in either class is usually due to physical disease.

14. That the physical conditions or diseases, both in sane and insane, in which the above structural alterations most frequently occur, are debilitated states of the system and general vitiation of the blood, resulting from long-continued and exhausting diseases, *e. g.*, anæmia resulting from phthisis, menorrhagia, or intestinal diseases.—[*Psychological Jour.*

Diuretics and their Uses.

Dr. Baines read a paper on this subject. After some introductory remarks, he divided diuretics into two classes—the direct and the indirect. The direct were considered as local stimulants to the kidneys, their active principles being conveyed by the capillary circulation to the glands, and thereby exciting them to increased action. Some direct diuretics ex-

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cite the same action by being excreted entirely by the kidneys, as is the case with nitrate of potassa, which salt is always found to be thrown out of the system in the same proportion as it has been administered. Other salts of this class, however, experience some change and re-arrangement of elements, and are presented to the kidneys in different states of those in which they were administered. Thus the acetates of the alkalies invariably become converted into carbonates, and in this latter state of chemical combination produce their stimulating effects upon, and are excreted by, the renal organs. Analogous facts were mentioned as occurring during the administration of mercury, when the bile has been found to contain traces of the mineral; and also that ether and alcohol are found in the brain, an organ upon which their specific effects are produced. In the case of indirect diuretics, however, the case is different, their effects being caused through the system generally, rather than by any positive action on the glands in question. Some of these produce diuresis secondary, the primary effect being manifested on the absorbent system generally, whereby the blood becomes charged with water, and the kidneys then are called upon to excrete it from the body. Mercury and iodine were adduced as examples of this class. Other indirect diuretics act primarily on the stomach, and secondarily on the kidneys, this end being accomplished either by lessening arterial action, and thereby promoting absorption, or by increasing the quality of the blood, and so causing the kidneys to share in the general improvement of the body. Examples of this kind of action were seen in the effects of digitalis, and in the preparations of iron. The beneficial effects of digitalis in cases of dropsy were then discussed, as was the necessity of relieving the portal system, in cases where the liver and its veins are gorged and congested, before we could hope to rouse the renal glands to increased action. Colchicum, mercury, taraxacum were instanced as examples of diuretics acting indirectly by relieving the portal congestion if present. The circumstances modifying the action of these remedies were stated to be:—1. The state of the skin, profuse perspiration preventing the establishment of a full diuresis. 2. Active catharsis suspends the operation of the kidneys, by diverting the fluid of the system from the kidneys to the intestinal glands; a good instance of the kind being seen in asiatic cholera, where the kidneys do not and cannot act, simply because all the fluid of the body is evacuated by the stomach and the bowels. 3. No obstruction must exist in the course of the intestinal canal to prevent the flow of the medicine swallowed, as shown by Dr. Barlow. 4. If there be extensive disorganization of the kidney, the due secretion of urine cannot take

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place. 5. If the anasarca or ascitis be very extensive, the pressure consequent upon it acting on the veins and lymphatics prevents the absorption of the remedies or of the fluid to be evacuated—in these cases tapping or puncturation of the limbs must first be resorted to, and then by removing the pressure alluded to, allow the removal of the dropsy by diuretics. The subject of the dilution of the saline diuretics was then alluded to, and as their absorption was considered to depend upon the ordinary principles of endosmose and exosmose, the opinion that, to be absorbed and so act as diuretics, these remedies must be so far diluted as to be below the specific gravity of the serum of the blood was upheld; otherwise, in place of a diuretic action, a purgative effect would be produced. The effects of acetate and bitartate of potassa were instanced as bearing out this view. Blood depuration by the kidneys, was then considered, and viewed as possible in some cases. The various cases in which the blood in disease is, by means of the kidneys, thus depurated, were then mentioned. Thus in jaundice, where the flow of bile or its secretion is interfered with, the urine is often found charged with it, and by means of this secretion it is removed from the system. Again, in cases of portal congestion, the urine is often found loaded with purpurine; and, in extensive pulmonary disease, Dr. Hassal has detected indigo in the urine, both of which compounds are highly rich in carbon. In health, the solid contents can scarcely be increased by the administration of diuretics, their effects being confined to the increase of the water only of the urine. Thus, if nitrate of potassa is given in a healthy state of the system, we shall find that in the urine secreted the amount of solids excreted only exceeds that under other circumstances by the amount of the salt exhibited, the whole of which passes out of the system by this secretion. This result, too, would be expected, when we remember that in health the two processes of repair and waste go on "*pari passu*" in direct relation to the wants of the system; hence, we cannot expect to do more than increase the fluids, without affecting the amount of the solids of the urine. But in disease where the whole animal economy is involved and suffering from the various faulty assimilations in perverted nutrition, it is possible that some of the morbid elements may be removed by the action of diuretics, as we know the poison of lead is eliminated by the kidneys by the action of iodide of potassium. The diseases most likely to be benefited are gout, rheumatism, scrofula, and some perhaps all, kinds of fever. In confirmation of this view, the treatment of rheumatism by acetate of potassa and nitrate of potassa, and the general good results obtained by the administration of the former salt in cases of ague, as re-

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ported by Dr. Golding Bird, was adduced. In the latter case, the quantity of solids excreted fluctuated with the occurrence or non-occurrence of the ague fits. The salts most likely to produce this effect in the system are those which are known to exert chemical changes in albumen and albuminous tissues.

[*London Lancet.*

Successful Treatment of Acute Rheumatism by the Acetate of Potash. By Dr. Golding Bird.

In the last number of the Journal, we alluded to Dr. Bird's interesting remarks on renal depurants; and here we have merely to present our readers with the same author's experience with regard to the treatment of acute rheumatism by *one* of that class of remedies, namely the acetate of potash. On this point Dr. Bird uses very strong language, affirming, that he has never seen the disease in question yield with so much facility to any other remedy. In the several cases in hospital practice under his own care, Dr. Bird has seen the cure to be more rapid, and the immediate relief to the patient more marked, by the use of acetate of potash in quantities of half an ounce administered, largely diluted, in divided doses in twenty-four hours, than by any other treatment. In three days he has frequently found the exquisite pain of the joints nearly absent, the patient comparatively comfortable, and able to bear with greater ease the helpless state in which the still swollen joints placed him. In no case have any bad consequences succeeded the employment of the remedy, while complete recovery has been more expeditious, and the ill-effects of colchicum and mercury have been avoided. The most interesting and no less important fact has been noted by Dr. Bird in his experiments with this salt, namely, that the pain of the disease remarkably declines so soon as the urine becomes alkaline and rises in specific gravity; and he further records his impression, that the tendency to affections of the heart is very much lessened after the alkalinity of the urine has been established.

Dr. Bird's experience of the efficacy of the acetate of potass, in the treatment of acute rheumatism, has been derived from a large number of cases. The only adjuvants he has employed have been a mercurial laxative, if constipation existed, and a full dose of Dover's powder, on the first day or two of treatment, if the pains be severe; the joints being wrapped in sheets of wadding, a plan the author has followed since he experienced in his own person the comfort it affords.

[*Urinary Deposits—from Blister and Critic.*

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Cholera and its Treament.

In almost every journal which we take up, we find some new suggestion on the treatment of cholera. Such, however, is our skepticism as to the curability of cholera, that we rarely place any reliance on the thousand and one vaunted cures which are daily put forth for this inscrutible disease, believing, as we do, from ample and melancholy experience, that ninety and nine out of every hundred really bad cases will prove fatal in spite of all that can possibly be done, while perhaps as large a proportion of the mild cases will recover under different and even opposite plans of treatment. But, while such is our firm belief, yet we are open to conviction, and therefore give place to the following letter, written by Dr. Lyne, of Livonia, La., addressed to Dr. Dowler, and published in the New Orleans Medical Journal.—[*Editor.*

LIVONIA, LA., *May* 14*th*, 1855.

Dear Sir:—I have two or three times, within as many years, commenced a communication to you on the subject of cholera. After writing a few pages my attention would be drawn from the subject, not soon to be resumed again. I have occasionally met cases since its last disappearance as an epidemic. Within a year past cases have occurred more frequently, and this year more frequently than the last. It is now but three days since I was prostrated by it myself, and am but just recovering from its effects. The disease has prevailed this spring on the plantation of David Barrow, in this neighborhood, with, I understand, about twenty fatal cases. I did not attend them, consequently can say nothing about those cases.

When the cholera made its appearance in Louisiana in 1832-3, I was residing at Clinton, in this State. The disease not having appeared in that part of the State, I had never seen a case until I witnessed it on Bayou Grosse Tête, in May, 1849.

The first four cases I saw were on the plantation of Col. H. A. L. They occurred on the 1st, 5th and 7th of May; all of them with the characteristic symptoms. The history and appearance of these cases differed as little as did the result. They all died in from three to five hours from the time I saw them. In treating these cases I found no difficulty in arresting the purging, vomiting, cramps and profuse sweating, and could restore natural warmth to the body and extremities, with a natural soft feeling of the skin, in an hour. In short I could do every thing I desired, except make my patient live. I could

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not restore the pulse, nor disembarrass the breathing. Having lost my first four cases under (what I supposed) a well digested plan of treatment, I became satisfied I was merely treating the symptoms—not striking at the seat of the disease. The question to be solved was, Where is the seat of this disease? Two days after the death of my fourth patient, I was called to a young negro fellow in the same condition I had found the others. I determined to abandon my former practice, let the consequences be what they might; but had not fixed on any other. I examined minutely all his symptoms; listened patiently to his own account of his sensations; pressed all over the chest, abdomen, and in the pelvic regions. He complained only of the abdomen. When I attempted to examine the *spine*, he assured me there was nothing the matter there; his disease and suffering were all in the abdomen. In my examinations of the spine, he began to complain soon after I reached the dorsal; he complained that I was pressing much harder than I had done before. There was a point at which he complained mostly, and as I receded from that point up or down he complained less; the tenderness on pressure was confined to four or five of the processes of the spine. I asked him where I hurt him by the pressure; he answered that the pressing hurt him at the point of pressure, but my pressure caused a greater increase of the pain in the abdomen than it did in the spine. Also, that the hurting in the spine and the increased hurting in the abdomen ceased as soon as I stopped pressing. I immediately acted upon this hint; scarrified and applied my cups on nearly the entire course of the spine, with two or three additional cups on each side of the tender point. After drawing some ten or twelve ounces of blood, or rather when I found no more could be drawn, I removed the cups and applied a mustard plaster on the whole course of the spine. He had been purging every fifteen or twenty minutes, and vomiting occasionally before the cupping. After the cupping there was neither purging nor puking. I had ears of boiled corn placed around him under his blankets, and constantly replaced as they became cool. In half an hour the extremities became warm. From the steaming of the corn and the previous perspiration, the surface was as wet as though he had come out of a bath. I then had him rubbed with dry mustard, and gave him two pills of cal. 2 grs., sac. sat. 2 grs., opium 1 gr., to be repeated if necessary. *It was not necessary.* There was no return of any of the symptoms. The next morning I met another case, in which, although the feet and legs to the knees, the hands and arms to the elbows, were cold, still the cold sweating and shrivelling of the skin had not yet commenced. This case was cupped freely on the spine. Having no pills and being in a hurry,

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I gave about 6 grs. calomel and 1 of opium; directed the feet to the fire, with more blankets. In the evening, seven or eight hours after, I again saw this case; no symptoms of cholera, but complained of being badly salivated, which continued for the next week or ten days.

Since that time I have had about one hundred cases of cholera. I have never seen but one, (a little girl, seven or eight years old,) in whom I did not find the tenderness to exist. I not only have not lost a single patient with cholera since I adopted this mode of treatment, but I have *never failed to give entire relief from all symptoms* of the disease in the space of an HOUR.

Were it deemed necessary, I could detail many cases, but will only occupy a moment longer by giving my own case, which occurred on Saturday last. Up to dinner I felt as well as ever. I made my dinner on boiled cabbage, a raddish, corn bread, blackberry pie, and a glass of milk. In an hour and a half, or two hours, I felt an uncomfortable sickening sensation in the stomach and umbilical region—soon after vomited—in fifteen or twenty minutes purged—natural—soon after vomited again—followed by an other discharge from the bowels of moderate consistence—for another hour purging nearly all the time—light watery, or rather the appearance of dirty soap suds. The pain in the bowels at first slight, soon became very severe—constant desire for water—suppression of urine. I had not suspected myself the subject of cholera until I felt cramp in the feet with coldness. Even then I could not detect with my own efforts the characteristic symptom, *tenderness* of the spine. I called a servant and caused each spinous process to be pressed upon. I found the servant could create the same hurting in the spine, extending to, and aggravating the pain in the abdomen, which had been described by others, when the dorsal vertebræ were pressed. I immediately had my spine, and I believe my entire back, covered with cups. If the servant's awkwardness and roughness could increase the counter-irritating effect of that operation, I had the full benefit of it. Under the influence of this disagreeable and painful operation, I not only felt relief but comfort, when compared with my former sensations. The cupping over, I took five or six grs. hyd. cum. cret. and one gr. opium, and two grs. tannin. I was relieved of all the symptoms by the time the cups were removed. No discharge from the bowels until last evening, very little—natural in color and consistency. To-day, small one, showing the effect of the mercurial alterative on the liver; yesterday, the kidneys were more active than usual. Since Saturday night, I feel no other inconvenience than debility and hunger.

I know as little of the causes of cholera as any one. Nor do I know how those causes (if external) enter the system. Nor

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do I know how they impress the system so as to cause the disease called cholera. But I feel sure that about the first effect of *the* cause manifests itself about the spinal cord and spinal nerves.

Chloroform in Midwifery.

Prof. E. W. Murphy, in a recent work reviewed by Doctor Churchill in the April number of the Brit. & For. Med. Chir. Review, from which the following quotation is taken, advances the subjoined Rules for the administration of chloroform in child-birth:

Rule 1. Let the chloroform be pure. If rubbed on the hands, the smell should be fragrant, not pungent, like sulphuric ether. If inspired from the inhaler, there is a sense of warmth in the mouth, a fruity flavor, no pungency; if the strength of the vapor be sufficient, it will excite a slight cough—but if impure, the cough is irritating. Let the sponge of the inhaler be placed in warm water, and then rung perfectly dry. About thirty minims may be poured upon it, which is sufficient in the first instance.

2. When labor has commenced, do not interfere so long as the patient bears her pains well; if she be not teased with short, very severe, and inefficient pains, chloroform need not be given. If, on the contrary, the severity of the first stage be such, the anguish of the patient so great that pain is evidently a cause of protraction, chloroform may be given with great benefit.

3. Always commence with a small dose, about thirty minims; if it agree with the patient no inconvenience is caused, but she will generally complain that it is doing no good; the quantity may then be increased, until on inhalation the exhibitor finds that she can not take a full inspiration without cough.

4. In the second stage of labor, chloroform may be given when the head is approaching the perineum, or before then if the pains become intolerable. This may be known not merely by their greater intensity while the uterus is in action, but also by the restlessness of the patient in the intervals. She is watchful, dispirited, still crying, but in a more subdued tone, from pain and a feeling of soreness.

5. When the head arrives at the perineum, chloroform may be given in a fuller dose, if it have not already accumulated. The perineum yields more easily under its influence, and the

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severity of the pains is controlled without any loss of force. This rule applies especially to cases in which powerful forcing pains are acting against the perineum at the hazard of its laceration.

6. When operations are necessary, if they are not severe—as, for instance, some forceps operations—chloroform may be given in the same manner as in natural labor, but always after the instrument is applied. If severe, it may be given as in surgical operations, but not to the same extent. Hence an assistant is necessary who is conversant with the properties of this anæsthetic. It is obvious that the same person can not operate and give simultaneously the full sporific dose of this agent.

7. The inhaler should be applied to the mouth just before the pain commences, two or three full inspirations taken, and the moment the action of the uterus ceases it should be withdrawn. The inhaler should never be applied in the interval between the pains, and if used in the middle of a pain the cries of the patient blow away the vapor and no relief is given.

8. When inhalation has been continued in this interrupted manner for some time, if any alteration be observed in the countenance or manner of the patient—if the face is flushed, or bloated, or tinged with a slight lividity—if she ramble or become hysterical, let the inhaler be withdrawn, and the face of the patient fanned. Wait until the pains return to their original severity before renewing the inhalation, when it is probable that these symptoms will not return.

9. In some instances, the patient is very intolerant of her pains, and if given chloroform to relieve them, she becomes hysterical, crying perhaps louder than before it was inhaled. In these cases it is better to induce sopor, which may easily be done, without stertor. For this purpose, a sponge and folded handkerchief applied to the nostrils is preferable to the inhaler. Whenever sopor is brought on, the closest attention should be given to the countenance—observe the irritability of the eyelids; to the respiration—notice its frequency, and especially stertor; to the pulse—mark its strength. The handkerchief should always be held at a distance at first, and be gradually brought nearer, but the sponge should never be applied quite close to the nostrils.

10. There should be the freest circulation of air in the apartment; and if, after delivery, there should be any feeling of faintness or nausea, ammonia in effervescence will relieve it.

[*N. O. Med. Jour.*

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A Brief History of the introduction of the Asclepias Verticellata, for the cure of Venomous Snake and Spider Bites. By JAMES C. HARRIS, M.D., of Wetumpka, Ala.

This plant, more familiarly known in this vicinity as the Indian snake weed, or *Fitzpatrickana*, may generally be found growing in a light grey or red soil, upon the uplands throughout the States of Alabama, Mississippi, Arkansas and Missouri, and in some portions of Georgia, Florida and Louisiana. It flowers throughout the months of July and August, and may be readily found in the above localities, where the forest growth is scrubby oak and hickory, or in the pine barrens, among the white oak runners. It has a succession of *white flowers*, extending from an inch to an inch and a half along its top, and from an eighth to a quarter of an inch in length, *each one resembling almost exactly the tooth of a snake.* It is *perennial*, and when full grown is from fifteen to twenty-two inches high, measuring in the largest portion of its stem from the sixteenth to the eighth of an inch in diameter, and terminating in a fibrous root, the fibres extending horizontally in every direction to the distance of five or six inches from the foot stalk. The stem is jointed, and from the root to the commencement of the first leaves is from eight to ten inches. The *leaves* are acerose (or needle-shaped), of a green color, and from an inch to an inch and a half long, four appearing at each joint. It is about the first plant that appears in the spring, and the last that disappears in the fall.

The use of the above plant was first introduced in the cure of snake bites in Pike county, Alabama, in the year 1824, by Caldwell Eastis, a white man, who had resided with the Choctaws, Cherokees and Creek Indians for the last forty years preceding. The account he gave of the manner in which its virtues were brought to his notice is as follows:—In the year 1804 or '5, when accompanying a party of the lower Creek Indians upon a trading expedition to Nashville, Tenn., one of the pack horses, whilst grazing near the Ten Islands upon the Coosa river, was bitten upon the leg by a rattlesnake. The limb immediately commenced swelling, and the animal exhibiting strong marks of excruciating pain, whereupon one of the party retired to the woods, and in a short time returned with a handfull of the above plant, which, being bruised between two smooth stones, was mixed with a bottle of water and given as a *drench;* two hours afterwards they resumed their journey, the animal limping slightly for the first two or three miles, afterwards giving no manifestations whatever of uneasiness or disease. He also stated that there was a tradition among these

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tribes, that a knowledge of its virtues being communicated to the white man, would most effectually destroy its remedial powers—as he expressed it, "break the charm." He afterwards frequently witnessed its administration for all kinds of *snake bites* to the Indians themselves, and to their domestic animals, and always with instantaneous relief.

For the foregoing account of the discovery and introduction of the remedy in this section of the State, together with a greater portion of the following, we are indebted to our friend, the Hon. Benj. Fitzpatrick, who some time in the year 1826 received the foregoing statement in person from Caldwell Eastis, then in his eightieth year, and since dead.

The usual manner of preparation and administration is as follows: Take and slightly bruise five or six of the entire recently gathered plant (root, stem and leaves); put them into a pint of spring water or sweet milk, and boil down to three gills. This is the ordinary dose for an adult, and is to be diminished proportionably for children, and given three times a day. The first dose generally gives immediate relief, and the others are merely given by way of precaution. After each dose is swallowed, the remaining bruised and boiled plant is to be applied to the bitten part.

The immediate effects upon the system of the above dose, appear to be that of a powerful *anodyne sudorific*, arresting the nausea and vomiting, and giving instantaneous relief to the pain, to be speedily succeeded by free perspiration and gentle slumber. Shortly after swallowing a dose, an agreeable sensation of warmth is felt throughout the entire frame, commencing in the region of the heart, and extending to the surface and extremities. The stomach, no matter how irritable, scarcely ever rejects the remedy; and if it does, never more than once or twice.

Since its first introduction in this neighborhood, in the year 1826, it has been used in more than forty cases of snake bite, and in every instance, as far as we have been able to ascertain, with the most happy results. Although it does not appear to possess the power of immediately reducing the *ædema* of the bitten extremity or part, it seems to completely destroy the disposition to any annual or periodic swelling or discoloration of the same. It has also been tried in several cases of *spider bite*, and in every instance has been attended with as complete success as in the cases of snake bite.

From its tremendous power in arresting and neutralizing the *virus* of the viper, the rattlesnake and spider, not only in the human species, but also in that of the inferior animals, we can not entertain the shadow of a doubt but that it will be found

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upon trial a complete *antidote* to any of the animal poisons, even that of the dreaded *hydrophobia.*

In a report on the indigenous botany of Prattville, made to the Alabama State Medical Association in 1852, by Dr. S. P. Smith, we are informed that the asclepias verticellata, a very popular remedy in domestic practice for snake bites, had been tried in one or two cases by himself, but not under such circumstances as enabled him to test its claims satisfactorily.

If we are mistaken in ascribing to the asclepias verticellata, in the cure of snake bite, the extraordinary powers that we have—as it is indigenous throughout the entire Southern and South-western States—we hope the profession will, through their published communications upon the subject, shortly set us right.—[*Southern Med. and Surg. Journal.*

The Treatment of Cancer by the method of Landolfi.

For several years past, Dr. Landolfi, chief surgeon to the Sicilian army and clinical professor of cancerous diseases in the Ospedale della Trinita at Naples, has been engaged in a series of experiments with a view to the discovery of some method of curing cancer. An interesting article in the *Archives Générales de Médecine* for May, affords us an opportunity of laying before our readers a description of the processes employed, and the results which have so far been obtained.

The specific remedies vaunted in the treatment of this disdisease, hitherto regarded as incurable, have given rise to well-grounded suspicion. The inventors are for the most part either physicians who have abandoned the ranks of the regular profession, or men completely ignorant of the science of medicine, whose zeal in proclaiming their discoveries is in proportion to their want of knowledge of the end to be attained. Dr. Landolfi does not belong to the class of inventors of secret remedies. His method is shrouded in no mystery. To use his own favorite expression, he seeks to promulgate the means he has employed, for the interests of humanity, and it is his earnest desire to submit them to a rigorous scientific investigation. To this end he has visited the great centres of science in Germany, and is now in Paris, where he is testing his method at the hospice of the Salpêtrière, upon patients selected by MM. Morissenet, Cazalis et Manec, physicians and surgeons to the establishment, assisted by a commission composed of MM. Mounier, Broca and Furnari.

The principle upon which the treatment rests, consists in transforming a tumor of malignant nature by imparting to it

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a character of benignity which will permit it to heal. This transformation is effected by means of cauterizations with an agent which is considered specific, the *chloride of bromine*, combined in some cases with other substances already frequently tried, but hitherto employed separately. The internal treatment is only accessory to the local application. The formulæ for the caustic are principally the following:—℞. Chlorides of bromine, of zinc, of gold, of antimony; mix in equal parts, and add to the compound liquid sufficient flour to make it a viscid paste.

The proportions of these ingredients were subsequently varied. ℞. Chloride of bromine 3 parts, of zinc 2 parts, of antimony 1 part, of gold 1 part. Powder of liquorice root, enough to make a thick paste. It is necessary to prepare the above in the open air, on account of the acrid vapors which are discharged.

The essential ingredient in these mixtures is the chloride of bromine, which has been latterly employed alone by Dr. Landolfi, being simply mixed with the powdered liquorice. According to Dr. Landolfi, the chloride of zinc is indispensable in ulcerated cancers, as an hemostatic. The chloride of gold is only useful in a small number of circumstances, particularly in the case of encephaloid disease, in which it appears to exercise a special, if not specific action. Cancers of the skin, epithelioma, lupus, and cystisarcoma of small extent, are treated by the chloride of bromine mixed with basilicon ointment, in the proportion of 1 to 8.

In employing this agent, the healthy parts surrounding the cancerous tumor are covered with broad compresses spread with an ointment composed of 8 parts chloroform to 30 of lard, or cold cream. The paste is then spread on small pieces of linen, which are placed over the diseased mass, in such a manner as to cover it completely, except for a short space from the circumference, its action often extending for a distance of one or two lines. M. Landolfi calculates that a layer one line in thickness will act to a depth of half an inch. During this application, the precautions mentioned above should be taken to avoid the pernicious effects of the vapor of chlorine, by placing the patients near an open window. After the paste has been applied, it is covered with scraped lint, and compresses, which are kept in place by strips of adhesive plaster.

The first effect of the application of the paste is a vivid sensation of heat, soon followed by pain, which is often intense, lasting from four to six hours, or longer. At the end of twenty-four hours the caustic is removed, and a line of demarcation is almost always found, separating the sound from the diseased

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parts. The tumor itself is partly white, partly reddish, or marbled yellow and blue. A bread poultice, lettuce leaves, or compresses spread with basilicon ointment, are applied, and renewed every three hours, until the escar separates, which process takes place about the fourth or fifth day, and is completed without pain between the eighth and fifteenth, leaving a surface covered with granulations, and secreting pus of a good quality. In most cases the cure takes place rapidly, cicatrization progressing from the circumference, and resembling that following a wound made by a clean incision.

There are two questions of interest which occur in relation to this subject. The first is, as to the innocence of the remedy. The testimony in this respect is so unequivocal that it commands conviction. None of the observers, more or less favorable, who have closely followed the experiments in Italy or Germany, have noticed any grave accident caused by its employment.

The second question is more delicate; were the tumors treated by Dr. Landolfi really cancerous? Certainly there never was a time when there was less disposition to admit the affirmative of this question without the most rigid scrutiny. While it is possible that the author has been often deceived in the character of the disease he has cured, we cannot but agree with Dr. Lasègue, the learned editor of the Archives, to whom we are indebted for the foregoing account, that "if carefully-instituted experiments have not yet proved that we possess a specific for cancer, observation authorizes us to believe that the treatment recommended by Dr. Landolfi fulfils conditions of great valne; that it cures, without risk to the patient, tumors and ulcerations whose treatment has hitherto been dangerous or difficult; that it affords to the surgeon a means of modifying diseased structures, at once powerful and safe, improving the condition of sores which art failed even to palliate; that its author, in fine, deserves to be distinguished from the crowd of inventors, whose panaceas cease to be useful after they are discovered to be neither specific nor infallible."—*Boston Med. and Surg. Journal.*

Nervous Ganglia of Lymphatic Glands.—Shaffner asserts that further researches have confirmed him in his opinion of the existence of microscopic ganglia in the lymphatic glands. He has, by degrees, brought the whole of some of the minute axillary glands of the mouse under the field of the microscope; a section being made longitudinally, and the structures treated with acetic acid, nerve fibres and ganglia were found, but very sparingly.—*New Orleans Med. and Surg. Journal.*

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On Keloides.—Read before the Boston Society for Medical Observation, March, 1855. By Daniel D. Slade, M. D.

The term keloid, or keloides, is applied to a singular affection of the skin, extremely rare, and not even described by many writers on cutaneous diseases. The origin of the word is involved in doubt; some deriving it from *chele*, a crab's claw—while others, with more propriety, suppose that it was derived from *kelis*, a burn, owing to the resemblance of the affection to the cicatrix left by such an injury. This disease was first described by Alibert, and by him termed cancroïde, like cancer. Since this writer, we find observations upon the same affection in the works of Biett, Velpeau, Cazenave, Warren and others.

Dr. Addison, who has recently published an excellent paper upon keloides, in the Transactions of the London Medico-Chirurgical Society, speaks of two forms of this disease under the names of "keloid of Alibert," and "true keloid." The former is the subject of the present paper. True keloid, he describes as a disease which has escaped the observation of other writers, and one which leads to much more serious consequences than the common form. It occupies the same tissues "and is first indicated by a white patch or opacity of the integument, of a roundish or oval shape, varying in size, and very slightly or not at all elevated above the surrounding skin," at commencement not attended by any pain or inconvenience, although a more or less vivid zone or redness surrounding the whole patch sufficiently attests the vascular activity going on in the parts beneath. As the disease proceeds, certain changes take place in the affected parts. Itching, pains, tightness, or constriction, are felt at the seat of the disease, accompanied by "a certain amount of subcutaneous hardness and rigidity extending beyond the site of the original superficial patch, although as yet without any necessary change in the appearance of the superincumbent skin. This hardness and rigidity can be distinctly felt, and, especially when situated on the extremities, may sometimes be traced along the course of the neighboring tendons or fasciæ, or stretching like a cord along the limb, so as to bend or shorten it, and even interfere with the natural movements." As the disease advances, the skin, which may have presented only a slightly drawn or puckered look, now shrinks or shrivels, undergoing a decided change of color, becoming reddish, pinkish or yellowish. The cutis manifests a tendency to superficial ulceration or excoriation; or when not excoriated, is occasionally surmounted by obscure tubercular or nodular elevations, the whole appearance closely resembling the remains of a very extensive and

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imperfectly cicatrized burn. The elevated, claw-like processes extending into the neighboring tissues may also often be seen, bearing a very exact resemblance to those which characterize the keloid of Alibert.

Dr. Addison does not enter into any speculation regarding the origin and nature of this form of disease. He merely states that this morbid process is allied to inflammation, probably of a strumous character. Neither does he dwell upon the treatment, excepting to remark that with the exception of iodine, none of the many remedies tried, seemed to make the slightest impression upon the progress of the disease.

I am inclined to suppose, on reading Dr. A's. description, that this form of keloides is more properly that form of *cancer*, which has its seat in the same tissue, the derma, and which has a tendency to increase rapidly, constricting and rendering the skin very tense, the parts becoming hide-bound. Velpeau calls this form cancer *rayonné*, and at his clinique I remember that he mentioned a case where the skin became so constricted over the chest by the progress of the disease, as actually to stifle the patient. He never advises extirpation in this form of cancer.

Warren, in his work on tumors, makes three varieties of this disease. 1. A white permanent elevation of the skin. 2. The spider-like pimple of the face. 3. The keloid of Alibert. To the latter form I wish to call your attention more particularly.

This affection, although rare, has characteristics so well marked that it would be difficult to confound it with any other disease, especially when it has attained any considerable growth. It first appears as a small pimple or tubercle, round or oval in shape, hard, shining, and generally of a reddish tinge, although the color may vary, as we shall presently see. Its growth is slow, and it may attain the size of an inch to two inches in length, half an inch in breadth, and an elevation above the surrounding skin of from several lines to one-fourth of an inch. To the touch it is hard, elastic, and would convey the idea of a cartilaginous body set in the skin. I can compare this peculiar feeling, particularly when the tumor is small, to nothing better than the induration which so well marks the true or Hunterian chancre, especially when this latter is seated upon some homogeneous tissue which can be easily compressed, as upon the prepuce.

In the majority of cases we find only one of these tumors, but occasionally several. Biett mentions the case of a young woman who had eight of them upon the sides of the neck and chest. Cazenave speaks of having seen more than twenty upon the chest and arms of a young female. M. Lebert saw, in the

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wards of Velpeau, a case where the whole pectoral region of one side was covered with these tumors, many of which were sufficiently large to have reddened and eroded the surface of the skin at their borders. They may be together in the same neighborhood, or occupy parts remote from each other. Their place of election would appear to be upon the chest near the sternum, between or upon the mammæ, or upon the arms. They may, however, occupy any portion of the surface of the body. Observation would seem to show that females are more prone to the disease than males. These tumors are generally attended with a pricking or burning sensation, more severe at certain times than at others. Sometimes it becomes almost insupportable, particularly in females—while in other cases, it gives rise to no inconvenience. As these tumors vary in shape, being sometimes oval, and sometimes elongated, with a convex or flattened surface, so does their color vary, from a blanched appearance to a light rose, or, as is most common, to a deep red, presenting exactly the tint of a cicatrix from a burn. Cazenave says, their color undergoes changes, according to the temperature, and in females, at the menstrual period. Their growth, as we have seen, is gradual and slow, and seems to be effected by the gradual encroachment of the claw-like processes from the sides of the tumor upon the surrounding skin, producing a puckered appearance of the tissues.

Keloides are developed in the derma, or more particularly, according to Dr. Addison, in the subcutaneous areolar tissue, between the cutis and adipose membrane. This gentleman attributes the redness and itching attending the growth of these tumors to the presence of a degree of vascular excitement nearly allied to inflammation, and which gives rise to a certain amount of adhesion amongst the meshes of areolar tissue around.

As to the causes of this singular affection, we must confess our almost entire ignorance. Some have attributed it to the influence of the strumous diathesis. That it really depends upon certain constitutional conditions, we have reason to infer from the fact of its almost constant recurrence after extirpation. It would seem that the presence of the cicatrix of a boil, burn or recent wound, sometimes acts as an exciting cause, as we find the affection more frequently developed upon such parts, than upon the sound skin.

In our prognosis, we can hardly consider that keloides are a serious or grave disease; and in those cases where it has assumed a malignant form, we may, perhaps, attribute such a result rather to the curative means employed than to the natural progress of the disease. If abandoned to itself, it makes very slow progress, and according to some authorities, occa-

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sionally disappears spontaneously, leaving behind merely a white cicatrix. Cazenave says that it very rarely terminates by ulceration.

In regard to treatment, we can say but little. Various internal and external measures have been tried, without satisfactory results. Extirpation and cauterization have been too often followed by a return of the malady. Addison says, that when the disease has been first developed in a cicatrix, the extirpation has proved more successful, than when it has occurred in the sound skin. When extirpation is practised, care should be taken to remove a good portion of the surrounding tissues, in order to be sure of leaving no apparent traces of the disease behind. Moreover, the lips of the wound should be brought well together, and secured by adhesive plaster or collodion, in order that we may obtain union by first intention. It has been observed that the disease has returned in the wounds made by sutures. Warren speaks of a case where the disease not only returned in the cicatrix, but also at each of the points where the needle was passed through, so that instead of one tumor there were seven. Cazenave says that iodide of potassium has been administered with some success in cases where the disease appeared to depend upon a scrofulous diathesis. As we have before remarked, this affection, like cancer, seems to depend upon constitutional causes, therefore it would seem rational to suppose that the only sure method of combating it, is by general treatment.

The two following cases have come under my own observation:

Case I.—February 7th, 1852. Mrs. P., colored, æt. 45. Reports that about four years ago, being in good health, she first perceived a small, hard, elastic tumor in the skin, just over upper third of sternum. Its growth, which was gradual, was accompanied by stinging, darting pains, almost constant, particularly at night, rendering her very uncomfortable. This tumor was also somewhat painful when squeezed or compressed. Knows no cause for the appearance of this tumor; never received any blow or burn upon these regions. At the expiration of two years, the tumor having attained the size of a large almond, she sought medical aid. Extirpation was advised and performed. The disease, however, returned in a cicatrix; and at the date when I first saw her, two years after the operation, the tumor had attained the same size as before, viz., about half an inch in length by one-fourth in breadth, raised several lines above surrounding skin and convex upon the surface; quite painful when compressed. As the patient complained greatly of the annoying, darting and pricking sensations to which this tumor gave rise, I advised its extirpa-

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tion again. This was done. Care was taken to remove a considerable portion of the surrounding healthy skin, and the wound was brought together by adhesive plaster. Although a portion of the wound healed by first intention, the disease returned in the cicatrix. I lost sight of the patient soon after.

Case II.—February 2, 1855. John F., æt. 25; married. England. Tailor. Of decided lymphatic temperament; light complexion and brownish hair. Reports that, about four years ago, he first perceived a small, hard, oval pimple or tubercle in the skin, just over middle of sternum. This continued to grow very gradually, its growth being accompanied by pricking, darting pains, much more severe when he became heated. About two years after, another similar tumor made its appearance, a little above and to the right of the first one, accompanied with similar sensations. About six months ago, another appeared to the left of the first one. Knows no cause for the appearance of these tumors. General health good.

Now, on examination, I find a tumor situated over centre of sternum, one inch and a quarter in length, half an inch in breadth, and raised half an inch above the surrounding skin; convex on surface. It is of a bright scarlet color, glistening, hard, elastic, regular in shape, with slightly-marked claw-like processes extending into surrounding skin from base of tumor. The skin in immediate neighborhood appears natural. Another tumor of similar character, and of nearly the same size, but not as hard or glistening, and of a blanched appearance, is seen to the right and just above the first described. Here the claw-like processes are very distinctly seen. Another, the size of a small pea, is to be seen at left of first. Suffers no pain on compression of these tumors.

Patient being desirous of having the largest of the tumors removed, the operation was performed. The same care was taken as in the first case to secure an immediate union. The disease has, however, returned in the cicatrix, and I have thought it useless to interfere with the other tumors.

Dr. Shaw made a microscopic examination of the tumor removed—this is his report:

The tumor, to the unassisted eye, has a fine, fibroid appearance; the fluid expressed from it was clear. The disease was apparently confined to the cutis, and was covered with the epithelial layer. Its minute structure consisted of fine, wavy, straight and curling fibres with a few free, oval, fibro-plastic nuclei, such as are commonly found in these growths. It resembled the structure of the condensed cutis, rather than the coarse fibrous structure of fibrous tumors.

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The following cases have been kindly communicated to me by Dr. J. M. Warren. One or two of them I had the opportunity of seeing with him.

Case I.—A lady, twenty-five years old, of very delicate skin, for many years had a tumor on the back of right forearm, which commenced first from a scar caused by a burn. The tumor gradually enlarged to the size of a dollar, was quite elevated above the surrounding skin, of a whitish color, with red streaks through surface of it. It was the seat of severe lancinating pains. It was carefully removed, with the subjacent cellular tissue, and healed slowly, but well. It was not possible to approximate the edges of wound, on account of its size and form. It remained well for some years, when the disease began to re-appear in the scar, and extended, so that at the end of nine or ten years it was nearly of the original size. Last year (1854) I again removed the disease, having first congealed the parts with a mixture of ice and salt. It again healed well. Now the place is occupied by a thin cicatrical tissue, much depressed beneath the level of the surrounding integuments. At one spot, there is a slight thickening and redness, the size of half a pea, and she imagines that after sewing a great deal she has a pain in it.

Case II.—Healthy girl, nineteen years old, with two keloidal tumors on sternum between mammary glands Tumors elevated, reddish, one the size of a ten-cent piece, the other of a pea, and placed about an inch apart. I removed one, and brought the edges together with adhesive plaster after a little dissection underneath the skin to loosen it and allow more easy approximation. Stitches were avoided, for fear of a return of the disease in the places of suture. The disease returned in five or six weeks, notwithstanding all the care taken to secure a good union.

Case III.—Lady, about forty years old; has had a small keloid tumor on sternum for three years, commencing small and gradually increasing. I advised removal, as it was becoming painful, and the patient was apprehensive of cancer. The disease was removed by a skilful surgeon in a neighboring city, and the wound brought together by stitches. I understand that the tumor has returned at the original seat, and also in all the places of suture.

Case IV.—I removed a tumor of this nature from a girl seventeen years old, about a year since. It was situated on the back, over the right scapula, and was caused by a burn. The tumor was elevated above the skin, had the usual lardaceous look, with vessels streaking the surface of it. The dressing was conducted with much care. The disease, however, reappeared within two months, but of less size, less indura-

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tion, and free from the darting pains attendant on the former one.

There is a general idea among medical men in regard to these tumors, that they are of a cancerous nature, and that they terminate in cancerous ulceration. The patients are alarmed by the lancinating pain, described as similar to those belonging to a cancerous affection. I have seen many cases besides those above described in the practice of other physicians, both at home and abroad, and thus far have had no reason to believe that there was any thing malignant in them; in fact, nearly all the above tumors were examined by experienced microscopists, and the only prominent characters of the texture were found to be fibrous—never cancer cells.

[*Boston Med. and Surg Journal.*

[Note.—This affection is quite common in this State (Georgia), among Africans or their immediate descendants, showing itself most generally upon the sternum in the form of one or more transverse bands of elevated and indurated cutaneous tissue. Although frequently of spontaneous origin, it does sometimes show itself at the seat of injuries of the skin more or less serious. We have seen several negroes in whom they resulted from the effects of the lash upon the shoulders and back; in others, from burns. It is comparatively rare here in the white race, as we do not remember having seen more than three whites affected with it, whereas we must have seen at least fifty blacks thus affected.

According to our observation it is very generally harmless. We have seen a few cases, however, in which it terminated in suppuration and then had very much the appearance of a schirrous cancer. Yet the general health seemed unimpaired and the suppuration was not attended with loss of substance nor extensive ulceration.

We have usually let them alone; but in two instances in which we practiced extirpation, the disease returned.] D.

[*Southern Med. and Surg. Journal.*

Treatment of Dysentery. By F. E. Gordon, M. D., (*late of Marion, Alabama.*)

I have concluded to submit to the Association the following brief statement of the result of my experience, derived from the successful treatment of some eighty additional cases of dysentery, during the spring of 1854. This is done the more cheerfully, as the opinions herein expressed are entertained by our

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local physicians almost unanimously, and more particularly since the success of South Alabama physicians, in this disease, seems to be questioned by Dr. Cartwright, in a late number of the New Orleans Medical Journal.

There are some points connected with the treatment of dysentery that deserve special attention. In the first place, an attack of the most violent character, in a plethoric subject, can be strangled at once by free, *serous* evacuations, amounting to hypercatharsis, followed immediately by morphine enemata. Some care and judgment are required in the selection of proper cases for such *active* treatment. Milder cases are treated successfully by saline purgatives sufficient to produce fœculent operations, succeeded by anodynes—or, in many instances, with the following mixture:

℞. Sulph. magnes., 31; tinct. opii., 31; aqua font., ℥iv.—M. Dose a table-spoonful every three hours.

Cases that have run on for ten days or more and resisted ordinary treatment, where the discharges have assumed a pasty grumous aspect may be relieved by injections of nitrate of silver, ten grs. to the oz. of water. In administering this remedy it is best, I think, to use but the one oz. of fluid and to take precaution to prevent its absorption. Although the pain is, usually, very great upon its first introduction into the bowel, tolerance is sometimes established and it would be retained unless washed out by a large mucilaginous enema. This should always be done if the silver is retained beyond ten minutes. The enema of nitrate of silver should not be repeated oftener than once in twenty-four hours, though it does not prevent the repetition of anodyne and mucilaginous injections in the intervals between its administration. Another important point is "to feed your patient." It is truly surprising how well the stomach does its duty when a continous structure is so gravely affected. Dr. Graves insists ably upon feeding the fevers of Ireland, but fortunately, having no maculated fever here, we have escaped the task. In no disease, however, of this climate, is feeding so imperatively demanded as in dysentery. Egg-nog seems well calculated to supply the albumen drained away in this disease.

Collapses occasionally occur suddenly in dysentery, and what is strange, in most of the cases that I have observed, when the bloody discharges were giving away to more natural evacuations. They are generally fatal—more so I think, than in most other diseases. I would judge that in about seven hundred cases of this disease, treated in this vicinity in the last four years, collapse has occurred five times—only one of these has recovered. Small doses of calomel and laudanum, one grain of the former to five drops of the latter, were adminis-

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tered every fifteen minutes, as recommended by Dr. Ayre in cholera asphyxia, in addition to the stimulants usually given. The calomel was withdrawn after fifteen grains had been taken, but the opium was largely increased, and had to be continued for several days. What agency the mercury had in effecting the recovery I leave for others to say.

[*Transactions Alabama Med. Association.*

Prize Essay on Stimulants.

We find in the "Transactions of the Illinois State Medical Society," an exceedingly interesting Prize Essay, by H. PARKER, M. D., on the "Differences in the Physiological and Pathological action of that class of remedies called stimulants, of which alcohol is the type, and tonics, of which the bitter Barks and Iron may be considered as specimens." We regret that our limits will not allow us to reproduce the paper in extenso. The following are, however, the conclusions of the learned author:

From a careful consideration of the facts and arguments now presented, concerning the nature of *vital* properties, and the modus operandi and physiological action of stimulants, of which I have considered alcohol the type, we may deduce in brief the following conclusions:

1st. That the elementary vital properties or forces of all living organized bodies, are in no way derived from any connection with the nervous system, but are inherent, distinct and peculiar. That they are susceptible to the impression of an agent, and capable of modification, independent of nervous influence.

2d. That *nervous force* is a property or function peculiar to the nervous system, and like vital force, is susceptible of great modification.

3d. That there may exist mental exhileration with increased nervous force, or excitement, and thereby a *sensation* of increased strength and energy, while the *vital* forces of the tissues, tonicity and susceptibility may be simultaneously *diminished* or *depressed;* and hence—

4th. That increased nervous excitement, or a temporary exaltation of nervous force, is no index of the true condition of the vital forces, or any evidence of increased strength or vitality.

5th. That the muscular activity and vigor and the general "hardiness" of the system, is wholly dependent upon undis-

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turbed healthy nutrition, and the due elimination of excretable substances from the body.

6th. That the popular belief, that the action of alcoholic stimulants is confined to the brain and nervous system alone, simply inducing mental exhileration and a temporary exaltation of nervous power, is not true; but that coincident with their action upon these structures, they exert in a variable degree, a direct and deleterious influence upon the component elements of the blood and tissues, with the ultimate effect of lowering the elementary vital properties of the body, tonicity and susceptibility.

This they accomplish in the following manner:

1. By their great affinity for, and absorption of the oxygen of the blood, thereby interfering with its agency in the formation of plastic material, and impairing the organizability of those compounds designed for nutrition and reproduction. 2. By preventing or retarding that vital change—the *conversion of venous blood into arterial*, and diminishing the functional activity of the secreting and excreting structures generally, thus causing a retention and accumulation in the blood of effete and excrementitious compounds. 3. By retarding capillary circulation and the metamorphosis of the tissues.

7th. That alcoholic stimulants diminish animal heat, and the exhalation of carbonic acid.

8th. That the popular notion that alcoholic stimulants promote healthy digestion and chymification, is not true, and therefore should be discountenanced and discouraged by medical men, not only as failing in this, but as destroying the natural sensibility of the stomach, and inducing morbid irritability and diseased action.

9th. That the stimulation and excitement which naturally follows the use of these substances, tends to destroy that harmony of action between the different organs and forces of the body, upon which their functioual activity, and the continuance and maintenance of health depends. Finally,

That alcoholic stimulants are the most unfit, and the le ast calculated of all other expedients to impart strength and vitality to the human system, or enable it to resist the depressing influences of cold or hunger, fatigue or disease, or any of the various circumstances and events to which it may be exposed.

From a careful consideration of the physiological and pathological action of tonics, as now presented, I shall deduce the following conclusions:

"1st. That tonics are hæmatic medicines, and as such, are *restorative* in their influences; that, unlike *neurotics* and *stimulants*, they have no direct or special action upon nerve matter.

2d. That they are not foreign to the blood, and may there-

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fore remain in it; that they improve its quality, and the plasticity or its organizable material, assisting digestion and promoting assimilation and nutrition. Hence they are slow but permanent in their effects.

3d. That they exalt the tone of the muscular fibre; and hence by their use, "the pulse becomes fuller, stronger, and regular, and the muscular power increased,"—that they increase the cohesion and density of the tissues—diminish profuse secretions when dependent upon atony and debility, and finally, augment the vital forces of the system in general, thereby restoring *susceptibility* when defective, and the properties and functions of the nervous system to their normal condition."—*Southern Med. and Surg. Journal.*

Ulceration of the Frænum Linguæ in Whooping Cough. By Gamberini *and* Zitterland.

The curious fact that an ulcerative point on the frænum of the tongue is almost invariably present in whooping cough, was first noticed by Zitterland in *Schmidt's Jahrbucher* for 1844. It makes its first appearance as a vesicle, gradually enlarging and deepening as the disease progresses, and disappearing as the cough abates.

M. Gamberini, in the *Archives Generales* for February, gives an interesting paper on the subject.

He has seldom seen a round ulceration, it being usually placed transversely to the frænum, and occasionally it is found situated at the lower part of the body of the tongue, near the frænum. M. Gamberini believes it is probably produced by the contusion of the frænum against the cutting edge of the incisors during the paroxysms. In some cases, in which the tongue, in place of being carried out during the cough, was retracted and drawn towards the pharynx, the ulcer was not present. He has never met with the appearance in other descriptions of convulsive cough; but if in these the tongue is carried against the edge of the incisors, it is so with much less frequency and constancy.

There will be no difficulty in testing the theory of M. Gamberini with regard to this affection, for the ulcer, whilst it may be occasionally absent in children who have teeth, should never be found in those who have not yet cut their teeth, as any contusion of the frænum, under such circumstances, cannot exist.—*Virginia Med. and Surg. Jour.*

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On Chlorosis Simulating Phthisis. By M. Rilliet.—In this essay M. Rilliet describes a condition of which he has seen many examples, and which he does not think has sufficiently excited attention. Young girls, or young wives, generally after prolonged grief or violent emotions, present the following train of symptoms, viz., general *malaise*, sleeplessness, palpitations, panting, breathing, decoloration of countenance, indigestion, dysmenorrhœa, or amenorrhœa. These symptoms of chlorosis may persist for several weeks, when another series appears, giving to the condition a different signification. The pulse becomes accelerated, as in fever, and there is general or partial increase of heat, accompanied by profuse general sweating, which occurs sometimes at night. Rapid and progressive emaciation follows, and the patient becomes so feeble as to be confined quite, or partly, to bed. After a month or two, but rarely before, a cough suddenly appears, and rapidly gets worse. It is dry and short, sometimes paroxysmal, and very distressing, and is accompanied by violaceous cheeks, an increase of transpiration, and sometimes by hæmoptysis. These signs lead to the fear of phthisis, but an examination of the respiration only furnishes negative signs, while the heart and large vessels reveal the chlorotic condition. There is also present an excited state of the nervous system, and melancholy. The appetite is capricious, rather than absent, and articles of food are sought for possessed of a strong taste, little in harmony with the febrile condition of the patient.

These symptoms persist, with varying intensity, for several weeks. Menstruation is arrested; but at its periods the febrile state becomes exacerbated, or, after a temporary calm, all the symptoms resume their former character. There may be every shade between a mere suspicion of disease of the chest, and a well-grounded fear of its existence: and although M. Rilliet now believes he is able to assure himself of the true state of such patients, this results from the experience he has acquired from observing the recovery of cases offering the same negative and positive symptoms. The purity of the respiratory murmur will not, however, always assure us of the absence of tubercles, for cases of acute, or even subacute phthisis, and even in a somewhat advanced stage, do not always furnish auscultatory signs. As these, too, are the very cases oftenest simulated by chlorosis, M. Rilliet endeavors to lay down some marks of distinction between the two conditions.

1. In febrile chlorosis, well-marked chlorotic symptoms precede the cough, while in the great majority of cases of phthisis the cough precedes the general symptoms. 2. The

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chlorotic cough sometimes resembles, in its *timbre* and mode of return, hysterical cough. In other cases, it is not to be distinguished from the phthisical; but it is often remarkable for the rapidity with which it increases, contrasting by its intensity with the complete absence of stethoscopic signs. 3. The fever is sometimes as ardent as in phthisis, but it differs in not usually taking on the hectic form in the evening, the exacerbations being very irregular and usually diurnal. 4. Contrary to what is observed in the phthisical, but in accordance with what often takes place in the hysterical and hypochondriacal, the patients are easiest in the evening; and they are sleepless rather from the excitement of their nervous system than from any increase of fever. 5. The pulse in the chlorotic is vibrating, nervous, tense, and often irregular,—in a word, "palpitating;" while in phthisis it presents a special character more easy to appreciate than describe. It is undulating, one pulsation running into another, giving to the touch a sensation analogous to that which would be furnished to the sight by two fingers rapidly turning around each other. 6. The sweatings as copious as in phthisis, are less regular, succeeding usually the paroxysms of cough, and occurring as often in the day as at night. 7. The emaciation is as complete and as rapid as in well-marked phthisis. The cheeks become violaceous, but the paleness of the face does not assume the dead-white of common chlorosis. 8. The menses are very early suppressed, and when they should appear, we have sometimes a remission and sometimes an aggravation of symptoms. When, however, they are suppressed in phthisis, it is at an advanced period, and without the production of any special effect. 9. The desire for high-flavored aliments during the febrile condition is not observed in phthisis. 10. It is the combination of the above marks of distinction, the prognosis of the disease, and the influence of remedies, that establishes the diagnosis completely. The criterion derived from the progress of the disease is the more important, inasmuch as there are undoubted cases in which chlorosis and tubercle are associated; and the possibility of such a coincidence must render our prognosis reserved, until a notable melioration justifies our treatment. Still, it is to be observed that it is rather the chronic than the acute febrile chlorosis that masks phthisis.

The disease should be treated with promptitude. Iron must be given, without regard to the cough, fever, or other symptoms which may seem to contra-indicate it; but alone it will not suffice, requiring to be combined with change of air, good hygiene, and abstraction of predisposing causes.

[*Med. Times and Gaz.*

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Case of Prolonged Utero-Gestation. By M. Green, M.D., *Cambridge, O.*

Dr. Hills:—In the 13th No. of the Counsellor, I read an article on "Unnaturally prolonged Utero-Gestation," by Dr. Johnson, of N. Jersey, in which he says that but "three cases of the kind had come to his knowledge," and refers to the case reported in "Braithwaite's Retrospect," the case reported to Professor Meigs, by Dr. Hortze, in 1853, and the case which came under his own observation in 1852.

I had a similar case as early as Feb. 25th, 1836, and as I was very young at the time, and had just commenced practice, I was at no little loss to know what to do for my patient.

I will give you a brief statement of the case, my treatment, &c.; and if I erred, let those who could have done better under all the circumstances, instruct others, with myself, how to treat such cases in the future, if it should ever be our misfortune to meet with them.

I had not at that time ever read or heard of a case of the kind, nor have I since, except those alluded to above.

I was called on the night of the 25th of February, 1836, to attend Mrs. Tuttle, aged 43 years, in her sixth accouchement. On arriving, I found her to all appearance in labor; her pains regular but not severe. Shortly after my arrival she vomited freely, after which her pains subsided entirely.

I remained with her during the night; she rested well, sleeping most of the night, and in the morning expressed herself as being as "well as ever."

I left, expecting to be sent for again the following night, as she informed me her "time was up," and she "had never before been mistaken."

I heard nothing from her, however, for eight or ten days, when, passing her house, I called to see her. She informed me that, on the day after I left, the "waters came away," and she had a slight hemorrhage which had continued up to that time; that she "had not felt the child move since her pains subsided," and she had a copious "secretion of milk."

I was satisfied, from her statements, that the child was dead, and gave her, as my opinion, that labor would certainly take place in a short time, and expel the dead and decomposing child. But in this I was sadly mistaken, as in a few days afterwards I was requested by her husband to visit her again. I found th- discharge from the uterus to be increasing and very offensive, and her general health giving way.

I proposed an examination per vaginum, not having previously done so, and found the os uteri about the size of a silver

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dollar, and as *hard and unyielding as an ivory ring!* I tried to force it to yield, but without the least success.

I gave ergot freely—used friction over the uterus to bring on contraction, if possible, hoping that by so doing, with manipulation I could *force* my hand through the ring and remove the child, which I could easily feel; but the ergo had no more effect on the contractile powers of the uterus than so much sage tea, and only sickened and prostrated my patient.

Now, I was "in a fix," and no one to assist me, either by counsel or otherwise.

I stated the case to my patient and her husband, and gave them my opinion that the uterus never could be emptied by any other means than a division of this *ring* with the knife. To this proposition they would not consent. I tried again to force the os uteri to yield, but with no better success. In fact, I might as well have tried to dilate an iron ring.

I then advised consultation, hoping that some more "experienced doctor" would know what to do in such cases. Dr. Hood, of Fairview, was sent for: he was an old practitioner, and when he came and had a history of the case and examined for himself, he frankly told the patient and her friends that he had never seen, or read, or heard of a case of the kind, all of which made me feel the more easy, as I was fearful I was not *posted* as well as I should be. I stated to him what I had done; what I had tried do, and failed; and what I thought should be done, provided the patient would submit. He agreed with me as to the nature of the case—the impossibility of forcing the os uteri to yield by manipulation, and what I had done in the way of medication, but was of the opinion that "nature would be sufficient to throw off the child by decomposition," if we would use means to sustain our patient's strength. I thought otherwise, and insisted on dividing the ring and delivering; but, in the absence of any authority or precedent to sustain me, I submitted to my senior's opinion, and left our case to nature, assisted by wine, porter, quinine and a nourishing diet. The case progressed, gradually her general health gave way, and in the month of July following she died—one of the most heart-rending objects it has ever been my lot to behold.

The soft parts of the child all passed away by decomposition, leaving nothing in the uterus but the *dry bones*, some of which I removed before death through the *ring*, but the larger ones could not pass.

A few days before she died she implored me to "cut the ring" and remove all the bones; but I declined, at *that stage* of the case, doing so, as I was satisfied she must die.

By reporting this case I do not expect to add any thing to what has already been written upon the subject by others, but

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it is *one more case* to the three before reported, and *the first one in point of date* of which we have any knowledge so far as I am informed.

QUERY.—Was I right in what I proposed doing?

[*Medical Counsellor.*

Opium in Peritonitis.—The following is from a conversational discussion in the Louisville Medical Club, as reported by the Secretary, DR. JOHN BARTLETT, *in the Western Journal of Medicine and Surgery.*

In compliance with the request of the Club, DR. BENJAMIN R. PALMER expressed his views on peritoneal inflammation.

He said that his attention had been particularly called to this disease. It prevailed where he had practiced in Vermont. He had been educated in the antiphlogistic school, and accordingly his first patient was bled three times—she died. The next patient he bled three times in twenty-four hours without affording relief. At this juncture he chanced upon a copy of John Bell's journal, containing lectures from Armstrong, who stated that for peritoneal inflammation there were three remedies—blood-letting, opium and calomel. He gave the opium in five grain, and the calomel in one grain doses. Of the two remedies, he deemed opium the more efficacious. Dr. Palmer's second case began to improve when opium was given.

About ten years ago, having been called to a patient rather advanced in the disease, he *commenced* the treatment with opium and calomel. He then experimented to determine if blood-letting might not be dispensed with, and he succeeded without it.

Dr. Clark tried opium alone, at Bellevue, and found it competent to cure. This was about ten years ago, and since that time Dr. Palmer has treated peritoneal inflammation with opium. He is satisfied of its extraordinary curative effects. He gives it to the extent of rendering the patient comfortable, —two grains every two hours in ordinary cases. Three years ago he treated a case giving five grains of opium every two hours for three days. In two or three instances he narcotised his patients, so that in one case the respirations were only three and a half in a minute. If the pulse of patients without opium is 120, it will sometimes fall to 100 under its influence. This remedy has been successful in his hands when there was hiccup, vomitings, pinched face, &c.

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Cases of peritoneal inflammation are rare even in the neighborhood of Woodstock; but for the past twelve years he has treated three or four cases each year. Some of the physicians in his section purged their patients—frequently calling the disease bilious colic. Such treatment was unsuccessful.

In relation to the constipating effect of opium, he had observed that as soon as the violence of the disease abates, there are frequent actions on the bowels. He remembers a stout man who went twenty-one days, another nineteen, and others twelve and fourteen days without evacuations.

Dr. Clark has satisfied himself that opium was competent to the cure of this inflammation by employing it during a severe epidemic of puerperal fever at Bellevue. Dr. Clark has given enormous doses of opium. In one case *four hundred and seventy-two* grains were given; in another, one ounce was exhibited in fourteen days.

Dr. Palmer mentioned the case of a woman who recovered from a terrific attack, and in whom he is confident the peritoneal adhesions gave way after having troubled the patient for several years. She referred the breaking up of these adhesions to the jarring produced by equestration; it was sudden and attended with pain, shock, &c.

Sometimes the opium produces perspirations; when it does he simply diminishes—does not suspend the dose. He has never known effusion in the cranium to result from its use.

In cases of colic Dr. Palmer gives opium first, and then uses evacuants.

Dr. Clark should be considered in the first rank of anti-phlogistic practitioners, and he proposed to try opium in pericarditis.

Dr. Palmer had never encountered an epidemic with opium. Dr. Clark, however, had; of seventeen of his cases, eleven recovered; those that did not recover were among the first treated. As to its modus operandi he had not speculated; its interference with the due oxygenation of the blood might be considered a mode.

Dr. John Hardin reported three cases treated by opium at the suggestion of Dr. Palmer.

One was a woman with metroperitonitis—sick two days. She had been treated with purgatives. Her pulse was 130; her abdomen enormously distended, and her face hippocratic. He ordered her one grain of opium every hour. She slept, and the next morning he commenced giving one half grain of morphine every two hours, continuing this dose for several days. She recovered in eight days.

Last winter he had another case, complicated with severe bronchitis. The patient had bad symptoms, tympanitis—in

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short, looked as if she would die in twelve hours. Under the opium treatment she recovered in ten days.

In a third case, occurring in a stout woman, he gave nothing throughout but opium; she was well in ten days.

Dr. Hardin has seen a number of cases of peritonitis occur during epidemics of erysipelas. He remembers that of two cases one died. The treatment adopted was not mentioned.

Dr. Gross referred to the mechanical effects of opium, as explanatory of its curative powers in peritonitis.

Dr. Hardin enumerated its physiological effects.

Dr. Knight said that he had treated a woman with peritonitis, twenty years ago, with opium, nitre and ipecac. He was in the habit of giving it as a remedy in these cases.

Dr. L. P. Yandell extolled its curative powers. He considers it the best remedy for sick headache.

Pustule Maligne or Charbon. By Dr. Wainwright.

The New York public have been much alarmed during the past winter and spring, by repeated notices which have appeared in the newspapers, of a strange and fatal disease which had made its appearance in their midst, producing death with great rapidity, and characterized by the formation of a peculiar pustule, generally appearing on the lips or other parts of the face, which quickly assumed a gangrenous aspect, and resulting in some instances mortally, unless promptly treated.

Dr. Wainwright, of New York, in an inaugural essay for his degree of Doctor of Medicine, has given the profession a sketch of this hitherto rare affection with us, compiled chiefly from French authorities, and we design presenting our readers with a brief abstract from his paper.

Our author divides this disease into two varieties, the *essential* and *symptomatic*. The first variety, when the pustule is the result of direct inoculation with a specific poison; the second, when the poison acts primarily on the general system, and secondarily producing its local manifestation. To the first variety he gives the name of "pustule maligne," and the latter he styles "charbon."

The pustule maligne may originate from a poison derived, probably, from some animal affected with this disease, whilst the charbon may be originated from some malarious influence, or is a spontaneous affection. Hence, we find the essential variety attacking those who are liable to acquire the affection from animals, as hostlers, tanners, butchers or cooks; whilst the symptomatic variety appears amongst persons living near

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filthy sewers, stagnant water, or marshy and malarious districts.

It is probable that the unusual prevalence of pustule maligne in New York, during the past winter, may be attributed to the extreme scarcity of food amongst the poor, and the necessity which has driven many to use meat of an unhealthy and poisonous character. Larrey gives many instances of persons acquiring this disease from eating the flesh of animals who had charbon, yet it seems difficult to prove that it has ever been transmissible from one person to another.

"This malady commences with a disagreeable itching, mixed with shooting pains, that are felt in the place where the tumor is forming. This point becomes red and slightly swollen, inducing the patient to believe that he has been bitten by some insect or reptile. Soon after, there appears upon the painful spot, one, or many, yellow vesicles, filled with a lemon-colored serum. The tissue of the skin is obstructed and swollen in the circumference of the tumor, forming an areola, at first red, soon becoming livid, and almost always producing vesicles similar to the first. The swelling extends farther into the surrounding parts. The vesicles that occupy the centre of the tumor, burst, allowing the fluid that they contain to escape.

"The dermoid tissue, which is at this stage exposed, becomes black, dried up, hard, and has the appearance of a piece of burned leather. This point is sunken, and adheres very strongly to the subjacent parts, whilst the areola, of which we have before spoken as formed, enlarges, assumes a livid color, and becomes gangrenous.

"In the first stage to the itching, that the patient at first feels, succeeds a painful sensation of tension, numbness, and slight throbbing pains: these disappear at the second stage. A general uneasiness constantly proceeds, or accompanies, the invasion of the tumor. The patient complains of dull pains in the head, vertigo, and sometimes of a disposition to vomit. The appetite is lost, and the sleep disturbed by unpleasant dreams and delirium.

"The pulse at the first is weak and slow, and as the disease advances the arterial pulsations lessen. The respiration is more labored than in the natural state, the urine scarce, and the alvine evacuations suspended. Sometimes the patient has hiccough, sometimes also the moral faculties are disordered, in a greater or less degree, depending upon the severity of the charbon, or its effect upon the general system. If the charbon is of a malignant character, all the symptoms are aggravated, and rapidly increase, the slough spreads, and the vesicles that you see in the areola break, discharging a reddish green fluid.

"The whole swelling presents a considerable elevation, de-

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forming the region where the tumor is developed, and disturbing the functions, not only of those organs in its immediate vicinity, but also those more distant. If the vital powers are too much depressed to enable them by a circle of true inflammation to surround the tumor, and confine the disease to that locality, the mortification that is called dry gangrene, will extend rapidly in depth and breadth. The absorption of this gangrenous and unhealthy matter, which is, without doubt, performed by the lymphatics, or the cellular tissue, deranges all functions.

"Organic life is first affected, the patient having frequent faintings, hiccough, oppressive respiration, and palpitation of the heart, causing a marked change in the pulse.

"The functions of animal life are also successively attacked, the patient having by intervals drowsiness, vertigo, and suspension of the intellectual senses. Death generally follows these alterations."

The diseases which are most liable to be confounded with this affection are furuncle, carbuncle, and plague.

"From furuncle it is easily distinguishable by its vesicular origin, its rapid progress, and by the rapidity with which it affects the general system.

"From carbuncle its separation is more difficult, carbuncle marching with almost the same rapid progress, producing analogous effects upon the general system, and resembling it somewhat in appearance. And as this is the disease for which it will, in most cases, be mistaken, I shall endeavor to give some of the chief diagnostic marks.

"In carbuncle, the cellular tissue is primarily, the skin secondarily involved.

"In pustule maligne, the skin is primarily, the cellular tissue secondarily involved.

"Carbuncle generally appears upon the back of the neck, or in the loins, where there is a dense fibrous fascia, this malady arising in connection with the areola tissue beneath such fascia.

"Pustule maligne, on the contrary, may occur on any part of the body, but always in relation with the epithelium, whether that be upon the skin or mucous membrane.

"In carbuncle, no vesicle is formed.

"In pustule maligne, the commencement of the disease is the formation of the vesicle.

"In carbuncle there are the small pin-hole openings communicating with the sphacelus beneath, and discharging drops of matter.

"While in the charbon there are rarely many openings; and although there is one, it has not at all the appearance of those

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in the carbuncle, being much larger, and without the defined edge that they in that disease present.

"Also, carbuncle generally attacks those advanced in years, seldom the young or middle-aged; charbon, commonly the young or middle-aged, seldom the old.

"Between the plague and the charbon it is not necessary to draw a critical distinction—although these two most nearly resemble each other, some even supposing that the charbon is nearly allied to the plague—for the reason this disease (the plague) is never met with in this country."

The treatment for this disease is simple, and if used promptly generally in our country has been successful. Free incisions into the pustule should be at once resorted to, followed, if necessary, by caustic applications; and a generous sustaining diet will, under usual circumstances, result successfully. Five cases, reported by Dr. Hosack rapidly recovered under this treatment, and Dr. Wainwright states that the incision always relieved the peculiar shooting pains which he considers characteristic of the affection.—*Virginia Med. and Surg. Journal.*

PART IV.

EDITORIAL.

MEDICAL SCHOOLS—EAST, WEST AND SOUTH.

As the time is at hand when young men throughout the country, who expect to devote themselves to the medical profession, are making their arrangements for attending lectures during the coming winter, a few reflections on the subject of medical schools, and medical education, may not be inappropriate.

The time has been when medical teaching in this country was almost exclusively confined to a few prominent points, and when it was deemed necessary for the student to travel a thousand miles, in order to reach one of these favored localities. But that time has fortunately passed, and the student now has no difficulty in finding institutions in every part of the country, where all the elements of a sound and thorough medical education may be acquired, provided, he is disposed to avail himself of the facilities afforded him.

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The rapid growth of our country in wealth, population, and general intelligence, has had the effect also of diffusing medical knowledge, so that no section of the country can now with any degree of propriety claim prëeminence in medicine.

It is true, that in early times, there was a concentration of medical talent in a few of our large eastern atlantic cities, and in a single point in the west, which gave these cities prominence in the profession, and not only rendered them attractive to students in quest of learning, but also to aspiring men in the profession ambitious of fame. But time has wrought a wonderful change, and the men who, in former years gave reputation to those cities have all passed away, and notwithstanding their places are filled by others in all respects their equals in talent, and even superior in learning; yet, owing to the altered relative condition of the country and of the profession, they can never hope to attain the position once occupied by their predecessors. We know, indeed, that it is difficult, and even quite impossible for the successors of these departed worthies to bring themselves to believe that what we here state is true, and hence their unwillingness to admit that the sceptre has departed from Judah, or that they, are not always to be looked up to as par excellence law-givers in the profession; but facts are stubborn things.

We do not wish to underrate, nor in any wise to detract from the real merits of the profession in any section of the country, but having had some opportunities of forming a correct judgment in the premises, both by personal observation, as well as from a connection of more than ten years with the medical press, we hesitate not to affirm, that notwithstanding the quiet self-complacency with which our brethren in the atlantic cities are in the habit of regarding themselves, and the low estimate they may be disposed to place on others in, as they suppose, less favored regions,—the medical profession in Cincinnati, Louisville, Charleston, Mobile, New Orleans, St. Louis, Nashville, Buffalo, Chicago, and other western and southern cities, which might be mentioned, is in no wise inferior to the profession in Philadelphia, New York, Boston, or any other eastern city— whatever may have been the relative position of these different sections in years that are past, and

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more than this, that the facilities for imparting a sound and thorough medical education in any, or all of these former cities, are as great as in any of the latter. In all are to be found men of talent, devoted to the cultivation of medical science, conveniently arranged college edifices, large and well filled hospitals, an abundance of anatomical material, and carefully selected and well arranged anatomical and pathological museums.

In what is here said, we by no means intend to intimate that the profession in the east has not kept pace with the advance of medical science, on the contrary, we distinctly and cheerfully admit that they have, and are disposed to render to them full credit for what they have done, and are still doing, for the advancement of our noble calling. When, therefore, we say that Philadelphia in the east, and Transylvania in the west, can no longer lay just claim to all the honors of medical teaching, we do not wish nor intend to rob these ancient and renowned seats of medical learning, (the former of which, we are proud to acknowledge as our own alma mater,) of one iota of their well earned reputation, but we simply mean to assert a fact, of which every intelligent physician must be fully aware, and which constitutes at once a part of the medical history of the country, as well as of the glory of our common profession.

In view of these facts there can be no good reason why western and southern students should forsake their own home institutions, which are equal to any in the country, and crowd those in eastern cities, in such numbers as to render it almost impossible for them to derive any benefit whatever from clinical instruction, no matter how extensive the hospitals to which they are admitted; for it is as clear as a demonstration that when five or six hundred students are turned into the wards of a hospital, not one in ten are able to observe disease at the bed-side in such a manner as to make it at all profitable; and as to the plan of introducing patients into a large amphitheatre, and there undertaking to impart clinical instruction, it is the merest farce that was ever enacted in the name of clinical medicine. So that in reality they are virtually deprived of the very advantages to obtain which they

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have traveled so far. This is the testimony of many of our most intelligent young men who have sought eastern schools for their supposed hospital advantages, and the uniform opinion expressed by them is, that they would have fared better had they remained at home.

Our deliberate judgment is, that it would be far better for the student, as well as promotive of the cause of medical learning, if there could be established such a numerical equality among all the schools as that none of them would have more than two hundred pupils. By this means a more intimate personal acquaintance would spring up between teachers and students, which would result in mutual benefit, and what is more important still, each one would have an opportunity of deriving practical benefit from personal observation of the bedside, which is after all the most important branch of medical education.

In advocating the claims of western and southern schools, we are influenced by no feelings of hostility to those in other sections of the country, engendered by local jealousy, neither do we sympathise with the narrow views of those sectionalists who contend that, in order to practice medicine successfully in any given locality, it is necessary to be educated there, but we would rather place their claims to support, solely on the broad and elevated grounds of equality, believing them to be equal to any others.

There are those in the medical profession who seem to regard the multiplication of medical schools in our country as a great and unmixed evil, but so far from being an evil, and tending, as they suppose to lower the standard of attainments, and to induce unqualified persons to enter the profession, we believe that the very reverse is true, and notwithstanding all that medical croakers may say to the contrary, that the effect is to diffuse medical information.

There is really no reason why medicine should only be taught in two or three, or a dozen cities in this broad land, than that instruction in literature and general science should be confined within the same narrow limits; for, as in literature and general science, so in our profession, the more multiplied the facilities for imparting instruction, the greater will

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be the intelligence of the masses. If the effect of multiplying medical schools should be to beget a vulgar rivalry among them as to which shall enrol the largest catalogue of students, and turn out the greatest number of graduates, irrespective of qualifications, then indeed it would be an evil, but such we are pursuaded is not the case to any considerable extent, and at all events this species of rivalry is not more likely to arise in the west and south, than in the east, nor among the smaller any sooner than the larger schools.

Wherever, therefore, men of talent and professional enthusiasm are to be found, (and they are to be found almost every where) with large and well filled hospitals, and an abundance of anatomical material at their command, there we believe that medicine may be taught with advantage. But without hospitals, which can alone afford clinical material, it is idle to talk of establishing or building up medical schools; for, notwithstanding the efforts of those who are interested in depreciating clinical instruction, the unanimous voice of the profession throughout the world attests its paramount importance, and declares hospitals to be *sine qua non's* to medical schools.

We say therefore to our young men about to embark in the study of medicine, seek home institutions, not merely on account of their locality, but because of their real excellence.

THE NASHVILLE JOURNAL.

The valiant editor of the Nashville Journal of Medicine and Surgery, seems to think that we are disposed to back out from any further contest with him, and therefore volunteers to give us, what he considers, some good advice. But really we have so poor an opinion of the editor, and so little respect for his judgment, that we are not likely to place a very high estimate on advice which he is able to give. Nor are we inclined to cast pearls before swine so far as to administer any good advice to him in return, believing as we do with Solomon, that "though thou shouldest bray a fool in a mortar among wheat with a pestle, yet will not his folly depart from him."

Now, how stands the case between us? For a long time

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past, the editor has been in the habit of puffing the school with which he is connected in the most inordinate, indelicate and unprofessional manner—a parallel to which is nowhere to be found, except among the "pill gentry," and nostrum advertisers. In one of the early numbers of the present volume, we took occasion to rebuke the course pursued by the editor in this respect, in terms such as we thought, and still think, it merited. This stirred up the bad passions of the editor, and drew down upon us a tremendous editorial article of seventeen and a half pages, which as we have heretofore stated was characterized by bad taste, bad temper, and inimitable balderdash, and we might have added, by an attempt at low wit. To this article, we in our turn, replied—correcting some of its numerous misrepresentations, and pointing out the editor's inconsistency, and the absurdity of his position. But instead of meeting our arguments, the editor by way of rejoinder, in his July number, has some dozen or more editorial squibs which in point of refinement are such as we would expect to find in the columns of the lowest of the penny press, of the Paul Pry order, but utterly unworthy of a medical journal; and because we expressed the opinion in our last issue, that they were too contemptible to call forth a reply, the editor with an air of triumph charges us with "rather ungracefully begging permission to quit."

Well, we acknowledge that we feel but little inclination to keep up a mere personal controversy (for to such the editor has seen fit to reduce it) with any one, and especially with the Nashville editor, and for two reasons: first, we have other matter on hand which we think better suited to the character of our journal, and far more profitable to our readers; and second, we feel satisfied that we would be worsted were we to engage in the business of bandying epithets, with one, evidently so thoroughly versed in the language of billingsgate,—and, besides, who can tell but that he may make us the subject of an obscene dogeral, in which department of literature the editor is so notorious. But, because one drops a skunk for fear of soiling his person by holding on to him, we cannot perceive that the skunk has any great cause to swell with pride, or to charge him with showing the white feather.

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One thing, however, in all the editor's effusions, strikes us as very amusing, and it is this, the manner in which he felicitates himself for the wonderful "respect and kindness" he has always shown to his professional brethren. To the medical press, we grant that he has been very lavish in his kindness, and as profuse in his compliments, as if his object had been to flatter them into silence.

The position of the editor seems to be about this, if others will stand quietly by and allow him to praise himself and those connected with him to his heart's content, and to throw up his hat and hurrah for the Nashville School in regular buffoon style,—then, in the exuberance of his delight, he is willing to praise every body else. This game he attempted to play off on us, and hence, he so often reminds us of the many compliments he has paid "us and ours"—but all to no purpose—we are ungrateful!

And now in taking leave of our amiable friend, towards whom, after all, we have no unkind feelings. We have only to say, that, when his passion subsides, and he comes to review this whole matter, under the influence of the sober second thought (if, indeed, he is capable of such a thing), he will find cause to regard us as among his best friends, for having told him plainly, *what the rest of the world think of him.*

MEDICAL MISCELLANY—SCISSORS AND PEN.

St. Louis City Hospitals.—The following persons have been appointed consulting physicians and surgeons to this institution for the ensuing year. Surgeons, Drs. Charles A. Pope and Joseph N. McDowell. Physicians, Drs. J. B. Johnson, W. M. McPheeters, John S. Moore and F. S. Frazier. Dr. E. Y. Bannister still retains the post of resident physician—a position which he has occupied for some four or five years, with credit to himself and to the advantage of the institution.

Dr. John R. Allen.—This gentleman, formerly of Kentucky, and recently for a short time a resident of this city, has removed to Keokuk, and has received the appointment of Professor of Obstetrics and the Diseases of Women, in the Iowa Medical College.

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Additional Hospital Facilities in St. Louis.—The new addition to the City Hospital, by which its capacity is increased three-fold, as well as the large and elegant Marine Hospital erected by Government, are both completed and ready for the reception of patients. These together with the large addition to the St. Louis Hospital give our schools new advantages for clinical teaching.

Medical Department of the University of Missouri.—Dr. J. R. Allen has resigned the chair of Obstetrics in this institution and removed to Keokuk, Iowa. The vacancy thus created has been filled by the appointment of Dr. F. S. Frazier, of this city, formerly of Springfield, Illinois, Dr. F. has our best wishes in his new and responsible position.

Fluid Extracts.—This convenient and concentrated form for the preservation and administration of medicines is becoming very popular with pharmaceutists—soon we will have fluid extracts of all the vegetable articles of the materia medica. The Journal of Pharmacy announces the fluid extract of ergot, among the recent preparations.

Prostitution of Medical Testimony.—A physician of New York, whose name we don't know and don't wish to know, testified before the Coroner's jury, in the case of Sarah Williams, the public prostitute, who committed suicide in Brooklyn, and about whom the New York people have again made fools of themselves by the display of ill placed sympathy (as in the case of Bill Pool), that she was "*a prostitute of superior grade, and a very honorable and sincere woman!*" What an idea the reprobate must have of female honor and sincerity?

Diuretic Wine.—M.. Granel suggests the following as a diuretic preparation, viz: squill sliced, and digitalis leaves bruised, each 3ii, best cinnamon 3iii, acetate of potash 3ss, Madeira wine, a pint. Macerate eight days and filter. Dose table-spoonful three or four times a day.

Opiate Inhalations in Neuralgic Pains.—Take two grains each of powdered opium and sugar, also gum benzoin if desired, which sprinkle upon a hot shovel held under the patient's nose. It will afford prompt relief in coryza, with pain in the frontal sinus, as also in the various neuralgic pains of the frontal, temporal and zygomatic regions, whether of an idiopathic or symptomatic nature.

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Rigidity of the Os Uteri.—Dr. Ronald in the Memphis Medical Recorder says:—Make an ointment of two drachms of chloroform to one ounce of lard or simple cerate. Freely applied to the external surface of the neck of the uterus, it causes a smarting sensation, which, in some cases, is not felt if applied during contraction of the organ. In twenty-five minutes the os uteri will be found dilating rapidly, soft and pliant, and in the case related, the woman was delivered in one hour and twenty-seven minutes.

The Medical Counsellor.—This spirited and well conducted medical weekly, published in Columbus, Ohio, and edited by R. Hills, M. D., has now been in successful issue for six months and is increasing in favor with the profession. It deserves a liberal patronage.

Fraud in the Preparation of Medicines.—Dr. Cleveland, in a communication to the Philadelphia Medical and Surgical Journal says, that he has detected the most outrageous fraud in the preparations known as "Positive Medical Agents," manufactured by B. Keith & Co., of New York. The most of them he says, "contain from four to eight parts in ten of carbonate of magnesia, or the leaves, or bark, or root of plants, rubbed up with the extract, or oleo-resin of the plants, and made into a dry powder, and then sold at one dollar or more an ounce." If this be so, the fraud as well as the knaves who are engaged in perpetrating it deserve to be exposed.

New College Building.—The College of Physicians and Surgeons of New York are now erecting a new and handsome college edifice on the corner of Fourth avenue and Twenty-third streets, which will be ready for occupation by next winter.

Jews Hospital.—The members of the Hebrew Faith, of New York, have erected a hospital of their own, with all the modern improvements—designed for the afflicted of their own persuasion. It is designed to accommodate from one hundred to one hundred and fifty patients.

Uterine Displacements.—The French Academy, by a unanimous vote, have decided against the propriety of using the intra-uterine pessary as being unnecessary and often injurious. After a fair trial of the pessary, we have ourselves, long since, discarded them, as inconvenient, offensive to delicacy, and positively hurtful. They deserve to be scouted from the profession.

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Fluid Extract of Scutellaria.—Dr. Bates, in the Boston Medical Journal, speaks in high terms of Tildens & Co's. extract of Scutellaria as a nervous stimulant. We have ourselves used the remedy in hysteria and nervous diseases, generally, with happy effect. The dose is a tea-spoonful. It is worthy more extensive trial.

Fee in Life Insurance Cases.—The Boston Medical Journal has some very sensible and well-timed remarks on the niggardly fees paid by most Life Insurance Companies for an examination of applicants for insurance. *Five dollars* is the lowest fee, the editor thinks, that any respectable physician ought to take in such cases—whereas, *one or two dollars* is the ordinary rate. To all of which, we of course say, amen.

Pure Brandy.—Under this head the Medical Counsellor gives a specimen of the vile stuff sold for medical purposes, he says, a chemical Inspector of Liquors in Cincinnati, recently examined a cask of *pure brandy* at a place where it was sold extensively, and found the following elements largely preponderating: alcohol, prussic acid, muriatic acid, oil of pepper, and tincture of myrrh. We suppose this might be recommended in cases of sickness, being so well charged with drugs!

White Indians.—Dr. George Lathrop informs the editor of the Peninsular Journal of Medicine, that north of Washington Territory, there are Indians of fairer complexion and more Caucasian features than those in the latitude of Olympia. Some of them have red hair, and all of them are very high in the natural power of intellect. Their manufactures display superior mechanical capabilities, specimens of which he has obtained. As the neighboring coasts of neither Asia nor America furnish any race which could have originated this variety by intermarriage, it goes to show that in spite of Gliddon and Nott, climate and other influences may transform races.

Quarantine at New Orleans.—Agreeably to an act passed by the legislature of Louisiana, the Board of Health of the State have advised the Governor to issue his proclamation declaring all ports within the torrid zone *infected*, thereby subjecting all vessels, steamers, &c., sailing from such ports to a quarantine of not less than ten days, seventy-three miles below the city of New Orleans. We are sorry to see in this enlightened age and country such an unnecessary interference with the commerce of a great city, when it can possibly do no good in protecting the city from yellow fever, cholera or any other disease as the result will sooner or later prove.

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Dr. McFarland of New Orleans.—This gentleman who is the senior practitioner of medicine in Louisiana, and a physician of high character, has addressed a letter to the legislature of the State, on the subject of yellow fever, quarantine and the like, in which he protests most earnestly against the present quarantine regulations, regarding it as in the highest degree absurd and injurious. He closes his letter with the following emphatic prophesy. "If, therefore, gentlemen, you retrograde so far as to establish a quarantine, after the signal failure of the former one, and at immense expense, it will prove a mortifying failure and mockery, and it will not be long before, in disgust and disappointment, yourselves or your successors will be compelled to repeal and repudiate it, and reproach and obloquy will follow you to your retirement, as a body that could be coaxed or driven by the clamors, or cajolings of a parcel of new comers, strangers to the past history of New Orleans, into the establishment of an institution, *useless, pernicious and retrograde*, the offspring of terror and ignorance, and which is fast going into dissuetude, and being abandoned by the most intelligent and enlightened nations of the world."

Foreign Honors.—Professor Daniel Brainard has been elected a corresponding member of the Medical Society of Geneva, in Switzerland. An honor worthily bestowed.

The Sultan of Turkey has recently conferred the honors of knighthood on Dr. Charles T. Jackson, of Boston, in consideration of his having discovered the anæsthetic properties of ether. Like honors have been conferred by several of the other sovereigns of Europe, and we rather opine that the doctor would in future prefer some more substantial testimonial of the value of his discovery. A service of silver is worth all the knighthoods in christendom.

Horse-flesh for Food.—M. Jeoffroy, St. Hilaire, has been enlightening the people of Paris, by lecturing upon the value of horse-flesh as an article of food, and recommends it as a good substitute for beef. We have heard of mountaineers who had been driven to the necessity of resorting to horse-flesh to sustain life, speak of it in glowing terms of commendation.

Buffalo Medical Journal.—Dr. Sanford B. Hunt has become sole editor of this excellent Journal, of which Dr. Flint was the projector and for so long editor. For some time past Dr. H. has been associate editor, and is well known as an able writer and an accomplished physician. We wish him eminent success.

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Tasteless Infusion of Senna.—Dr. Brandeis, in the Archives Generales de Med., recommends a cold infusion of senna in a covered vessel, for twelve hours, as especially useful in infantile therapeutics. By this modification of the process usually employed, the water contains only the cathartic and coloring matter, leaving the essential oil, the fatty matter, and the irritating resin, which are only soluble in hot water. Senna water thus prepared cold, is almost insipid, and its taste completely disappears when mixed with infusion of coffee or tea.

Traumatacin.—Dr. Eulenberg, of Berlin, gives this name to a solution of *gutta percha* in chloroform. He employs it in inveterate cases of psoriasis and eczema. It is applied with a brush so as to form a shining pellicle over the part affected, which must be renewed daily. We have repeatedly used this solution in chronic skin diseases with the happiest results. It doubtless acts by excluding the atmosphere, serving as an artificial cuticle. It may be employed in the proportions of a drachm to a drachm and a half of the gutta percha to the ounce of chloroform.

Dr. R. L. Bohannon.—The Richmond papers announce the death of this veteran in the profession at an advanced age. Dr. B. has for some time occupied the chair of Obstetrics in the Medical College of Virginia, with acknowledged ability.

The Stethoscope—This journal has ceased to be the organ of the Medical Society of Virginia, and has passed into private hands, having been purchased by Drs. Wilson & Lewis, by whom it is now edited. This change does not at all surprise us, indeed it is just what we have all along anticipated. We wish the new editors a long career of prosperity and usefulness.

Compliment to Newspaper Publishers.—At a meeting of the Pennsylvania State Medical Society, in May last, as we learn from the Medical Counsellor, resolutions were adopted, complimenting, in the highest terms, the "Delaware County Republican" and "Blair County Whig," and "some other papers," for exhibiting the true spirit of genuine philanthropy, in constantly refusing to insert in their journals the advertisements of patent or quack medicines, and zealously laboring to enlighten the public mind on the injurious tendency of such impositions. Such rare virtue in secular journals, certainly deserves the commendation of all, and especially of the medical profession. If all other respectable journals would do likewise—would cease to be the hired tools of quackery, the miserable parasite would soon die of inanition.

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THE ST. LOUIS

MEDICAL AND SURGICAL JOURNAL.

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PART I.—ORIGINAL COMMUNICATIONS.

Article I.

Chloroform—Read before the St. Louis Medical Society. By E. F. Smith, M. D.

Years have elapsed since the discovery of the anæsthetic property which certain volatile substances possess, a discovery which constitutes alike the greatest boon conferred upon suffering humanity, and the richest contribution which has been made to medical science. Unlike the introduction of other innovations it met in its reception no passionate and clamorous opposition, it was universally hailed as a desideratum which surgery had long and vainly searched; nor is this to be wondered at, its claims were too humane and world-wide, not to have elicited a grateful response from every philanthropic bosom. Immediately upon the discovery being made known, scientific ardor applied itself to the work of experimentation, the medical press everewhere teemed with contributions, until almost indefinitely multiplied, the question of its candid appreciation appeared somewhat embarrassed by the exuberance itself of facts. To general ardor succeeded a calm and rigorous appreciation of its claims, which has established, upon a permanent basis, the high expectations which

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its introduction had awakened. Upon the history of anæsthesia I shall not dwell, it is familiar to us all, that not long after the discovery of the anæsthetic properties of ether by Drs. Jackson and Morton, of Boston, Dr. Simpson convinced that there existed other substances possessed of the same properties and less objectionable than ether, introduced as its substitute chloroform, which, from its established superiority is now the agent almost exclusively used. The verity of anæsthesia has long since been demonstrated, its happy application to surgery generally recognized, yet there remains much for investigation. To appreciate thoroughly the mechanism of its remarkable action,—to determine to what extent it can be safely carried, to ascertain the contra-indications to its use, as well as the proper antidotal measures to its toxic action, are so many questions which I propose to offer to your consideration. The subject is interesting, and has a vast range, it will only be permitted me to develop its more important points, hoping thereby to excite a discussion which may prove equally agreeable and profitable. Although the utility of chloroform in surgery is generally recognized, there have not been wanting men of professional authority who have decried against it, regarding it when introduced as an agent, powerful and dangerous, with whose therapeutic and toxic action we were unacquainted, when fatal cases happened from its use, they have not failed to adduce them in prejudice of the practice. Some have gone so far in their opposition to chloroform as to contend that pain in surgical operations instead of proving prejudicial is beneficial. To negative such an assertion, it is only necessary to allude to a few facts. I might cite cases in which death has been the immediate result of the impression made upon the nervous system of patients by the mere communication to them of the necessity of an operation. How many patients have from the apprehension of pain alone deferred an operation which they were convinced was necessary for their relief, until the nature and progress of the disease rendered it more painful, dangerous, in some cases impracticable, and which might have been performed under favorable circumstances. Tumors have been permitted to grow until not only their position and bulk have

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produced serious embarrassment to important functions, but their intimate and important connections have rendered their removal difficult and dangerous, or originally benign, from the supervention of constitutional vice they have assumed all the characters of malignant transformation, articular disease has extended until the system almost exhausted from hectic has not been able to rally when its exciting cause has been removed by amputation, a calculus has been left in the bladder until from augmented size and prolonged irritation, consecutive vesical and renal disease has compromised the otherwise favorable results of lithotomy, aneurism has been permitted to increase until the arterial tunic from excessive distension has ruptured, and fatal hemorrhage succeeded. It is unnecessary to multiply these sad examples of by-gone surgery, they are facts, but the cause of unfortunate delay being removed by the introduction of anæsthesia, few patients are found who are not willing to submit to operation necesssary and opportune. An exaltation of nervous sensibility far from being favorable is inimical to the successful result of an operation, an unhappy complication, since its effects are not restricted to the mere time of operation, nor to the part operated on, extending beyond, they maintain the organism in a state of excitement prejudicial to the fortunate issue of an operation. From nervous excitement, long continued, part, and system alike feel the ill effects, the wound instead of proceeding regularly to union by first intention becomes congested, inflames and suppurates, inflammation may be limited or diffuse, simple or phlegmonous, erysipelas, angeioleucitis, phlebitis, pyœmia, constitutional irritation, traumatic fever, resulting in hectic or typhoid symptoms, tetanus, are so many complications which may peril existence.

I do not pretend to say that these accidents may not supervene when anæsthesia has been employed; while observation attests that they may and do occur, it also proves, and for evident reasons, that they are much less likely to arise, the principal sources of their excitation being removed. Who that has observed the tranquil progress of operations where chloroform has been employed, has not been struck with the advantages which it secures to their results? The patient in a state of

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tranquil slumber, unconscious of the long and painful operation which he is undergoing, upon awaking finds the operation, which had been to him the cause of so much mental excitement, completed, and the wound perhaps comfortably dressed; assured of his being relieved of his disease, and at the expense of no suffering, upon being put to bed, instead of shivering with nervous system depressed, he at once falls into a quiet slumber to awake composed and refreshed. Locally, sensibility is not only annulled at the time of the operation, the action of the anæsthetic seems to modify it for some time after the patient has recovered from its soporific effects; in many instances, it is only after having been assured of the performance of the operation, and aware of the existence of a cause of his abnormal sensations that he refers to them. It is useless to urge these points, turn we then to the more important of our subject and examine we the mechanism of the action of anæsthesia.

To appreciate the phenomena of chloroformation, and to follow them as minutely as is consistent with the prescribed limits of a paper, will be, we trust, to expose somewhat a methodical analysis of its details. Chloroform in its primary action is a local excitant, whether applied to the skin, sound, or abraded, or coming in contact by inhalation with the gastro-pulmonary mucous membrane, its primary effects are alike excitant. When regularly inhaled, the phenomena which result are in the order of their succession, a pungent and disagreeable taste, a titillating sensation of the fauces and glottis, involuntary efforts of coughing, and in some cases of deglutition, sometimes a spasmodic contraction of the glottis, severe and prolonged coughing, hyper-secretion of saliva and mucus, symptoms which are expressive of its locally excitant action. It is true, that these symptoms vary much in their intensity and duration in different persons, usually they are transient, and give way to those which denote that the substance has been absorbed and having attained through the circulation the nervous centres has commenced to impress them. In analyzing the phenomena of chloroform it is necessary then to distinguish in its action an influence anterior, and another consecutive to its absorption, the former is direct, local and

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primarily excitant, depending upon its immediate contact with the pulmonary mucous membrane, the latter is general and the result of its admission into the circulation and its conveyance throughout the organism. The general symptoms which result from its absorption are also at first expressive of its stimulant action, the pulse is accelerated, a sensation of increased heat diffuses itself over the body, there is a determination of blood to the head, the carotids throb with undue frequency and force, the conjunctiva is injected, the senses are troubled, vision and hearing being deranged, the diameter of the pupil varies, there are muscular tremor and involuntary agitation, the intellect is disordered. It is at this period that commences the real anæsthetic action of the agent, the patient removed from all external impressions is plunged, as it were into a sphere of new and ideal sensations. To nervous and muscular excitement a general lassitude succeeds, its sedative effects are now manifest, if a limb be raised and dropped it falls as an inanimate mass; the patient responds to no external impression however strong; if he be loudly spoken to or violently pinched, he manifests no consciousness of perception; in a word, the life of relation is completely destroyed. To the stimulant action of the agent a sedative and narcotic effect has succeeded, coma profound has ensued, the pulse is now usually slower and smaller, the face becomes pale, the conjunctiva almost exsanguine, the skin freely bedewed with perspiration, the eye-lids fall and the eye-ball is rolled beneath the superior lid, the action of the heart becomes slower and weaker, the voluntary muscles are paralyzed.

This stage has a varying, but usually a transient duration, and indicates the complete and satisfactory induction of anæsthesia; it is the period when operations, however painful, can be performed without the consciousness of the patient, and is generally prolonged enough for the completion of the greater part of operations. If sensibility return ere the operation is finished, or while manipulation is painful, a few inhalations of the agent suffice to reinduce its anæsthetic effects. A remark of practical importance may here be made, in a great many cases before the relaxing and sedative effects of chloroformation are obtained, (which is the state of system the sur-

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geon proposes to induce in order that all consciousness on the part of the patient may be removed before proceeding to operation), a stimulant action is excited, manifested as before remarked by intellectual incoherency, active delirium, violent and involuntary muscular action, the limbs being suddenly and forcibly tossed about, it requiring the force of many aids to retain the patient on the table; under these circumstances many alarmed at this strange and to them seemingly dangerous array of symptoms, from prudence, abstain from the further administration of chloroform, regarding these symptoms as evidence of its toxic action. This is wrong, experience has fully shown that these symptoms are indicative of no danger, but are only the stimulating effects resulting from its primary action. Continue the inhalation but a few seconds or minutes longer, and to this apparently formidable assemblage of symptoms will result that state desired by the surgeon familiar with the physiological action of the remedy, viz: profound coma, complete insensibility and full muscular resolution. This stage of anæsthesia, which we would term physiological, has, as we have remarked, a variable but ordinarily a slight duration. If the chloroform be judiciously abstracted, the symptoms of insensibility give way, and are succeeded in some cases by a sudden return of consciousness, and normal sensations; in others, the return of sensibility is more gradual and preceded by an appearance of surprise and even intoxication, the patient presenting a wild and bewildered appearance, often not yet conscious that the operation has been performed, even incredulous when apprized of its having been completed. In many cases, like in the reaction, supervening upon severe concussion of the brain or profound syncope, the return from insensibility to consciousness is preceded by vomiting, sometimes severe, though not long continued, and headache, which persists for some time. In a practical point of view, vomiting, which occurs so frequently, is a symptom worth noticing; for in this condition of system, where the muscles of the glottis are paralyzed, the rima glottidis is no longer protected against the admission of foreign substances, and the contents of the stomach forcibly ejected, may as well in passing over this region enter the larynx as be ejected from the mouth; a dangerous acci-

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dent as it may give rise to alarming and even fatal suffocation. Hence the use of chloroform has been prudently rejected in operations upon the mouth and throat from the imminent danger of apnœa from the gravitative trickling of blood in this important conduit; if employed, great precautions are necessary to guard against this accident.

Another remark which I might make in connection with this subject is, that chloroform should never be administered immediately after a meal, when the stomach is full. This portion of the subject will however be insisted upon when treating of the surgical applications of chloroform, pursue we then the action of the agent. Before this slight digression, we had arrived at the description of its full physiological action, the induction of profound coma, of complete insensibility, and remarked, that if prudently withdrawn, the return from this to a normal state is gradual, the organism having recuperative power to bring about reaction. Be the application of chloroform however continued, its action becomes more powerful and durable, its sedative effects more profound, its action is not restricted to the life of relation, the functions of organic life experience its depressing influence, its action now becomes truly toxic, and if its inhalation be injudiciously persisted in, death will as certainly result as from the administration of a toxic dose of the most violent poison. The symptoms now become urgent and alarming, all the functions evidence its sedative and toxic action, the face becomes extremely pale and cadaveric, the conjunctiva has an exsanguine appearance, the eye is dull, involuntarily turned upwards, the pupil is permanently dilated, coma is profound, respiration is difficult, interrupted and gasping, the contractions of the heart weak and almost imperceptible, the pulse thread-like, often inappreciable, the blood which escapes from the vessels is black, and the patient, if not relieved, dies from asphyxia. I say in fatal cases death takes place by asphyxia in the literal sense of the term, because the heart is, as it were, the *ultimum moriens*, and its arrest is the cause of the abrupt cessation of all the other functions. So long as the contractions of the heart can be appreciated, however feeble they may be, there is hope of re-animation, but as may be supposed in such a profound

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sedation, stimulants however powerful, exercise but little effect in reawakening its paralyzed action. Death, the result of chloroform, is of a compound or mixed nature, and results in my estimation from the toxic action of the agent upon the nervous centres, the arrest of other vital functions being secondary to, and dependent upon, the interruption of nervous action; it is from default of nervous communication that the heart ceases to contract, and the lungs to oxygenate the blood. Though the heart is endowed with an essential contractility, a function inherent to muscular fibre, yet for the sustenance of its uninterrupted action it is dependent upon nervous influence, being a reflex action, it is this communication which transmits to its fibres the power to maintain its regular and uninterrupted rythm. It is from the same source that the respiratory muscles derive the stimulus which excites them to regular and constant contraction, by which the chest alternately expanded and contracted, keeps up the harmonious play of inspiration and expiration; interrupt or intercept this nervous communication and you interfere with or destroy the function of respiration. The relation of function between the nervous centres, heart, and lungs, the tripod of life, is so immediate and necessary that one of these functions cannot be deranged or destroyed without its reacting in a notable measure upon the others. Thus in death, from chloroform, though the symptoms infallibly demonstrate that the fatal result takes place from the cessation of the action of the heart, other symptoms also clearly attest that the nervous centres and lungs suffer from an obstacle to, and destruction of, their functions.

There is then between the nervous centres, heart and lungs, a correlation of function, dependent upon nervous communication alike manifest in health and disease. Chloroform acts by absorption, by inhalation it comes in contact with the pulmonary mucous membrane, which is anatomically remarkable for the richness of its nervo-vascular supply and its extensive absorbent surface, by endosmosis it permeates its delicate tissue, becomes freely mixed with the blood, and is conveyed by the round of the circulation to all parts of the organism. The experiments of Blake, of London, have long since settled the question of the action of poisons; he has incontestibly proved

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that all poisonous substances, even the most powerful and rapid, act by absorption; there always (even with hydrocyanic acid) being an appreciable interval of time between the application of the poison and the manifestation of its fatal effects. We need not, however, rely solely upon these experiments which have long ago been decided conclusive upon this point, to support the assertion, that anæsthetics transmit their action to the nervous centres through the medium of the blood, and not through the nerves by the impression which they make upon the nervous filaments expanded upon the respiratory mucous membrane.

The experiments of Panizzi are alike conclusive on this subject, and prove that chloroform is no exception to the general law of the absorption of poisons. In these experiments, having cut the pneumogastric nerves, he found that their section changed in no manner the action of the anæsthetic. Further, to ascertain whether the nerves of the mouth, tongue and glottis might not transmit the anæsthetic impression to the nervous centres, after the section of the pneumogastric nerves, by tracheotomy, he applied a tube to the trachea and thus introduced the anæsthetic, still no changes in its action were observed. These experiments are then sufficiently decisive, and harmonize with the data of experimental physiology, which, as I have said, in poisoning by narcotic agents, prove that the propagation of their effects to the nervous centres is through the medium of the blood. I might, did space permit, multiply facts and experiments on this point, taking for granted then what is generally admitted by the best of authorities, as proved, that chloroform acts through the blood, it is reasonable to conclude, that exercising its narcotic and sedative action upon the nervous centres, it is from the default of nervous influence that the other functions, particularly that of the heart is deranged, depressed, or destroyed. There are some experiments which have been made by M. Gosselin, which would seem to show that chloroform has a special and sedative action upon the heart. In injecting it into the veins of animals, sudden, almost instantaneous death resulted, and observation satisfied him that it ensued from paralysis of the heart. In these cases, he says, death strongly contrasts in its

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suddenness with the slowness of the phenomena which accompany its action upon the nervous centres. In these cases, where chloroform was injected, he thought the paralysis of the heart was due to the direct contact of the agent with its internal surface, and reasoning upon the quantity of chloroform which is admitted into the organism by inhalations, and which he says is not sufficient to exercise a stupifying action upon the muscular fibre of the heart, he concludes that death, resulting from this mode of administration, ought not to be attributed to syncope. Against this deduction of M. Gosselin have been adduced the facts that the fatal cases have happened with patients who have been chloroformed under conditions favorable to the production of syncope; thus, in patients who have been exhausted from severe loss of blood, or in urgent anæmia resulting from long continued and excessive purulent drain, in organic affections of the heart, in patients extremely nervous by virtue of natural constitution, and in cases where the chloroform was administered while the patient had been placed in a vertical position. These states of system predispose the nervous system to the action of a sedative and narcotic poison, and when under such conditions dangerous effects have resulted from chloroform, they have ensued from the increased impressibility of the nervous system. M. Gosselin contends, that there are two ways by which chloroform can kill; in the one, where it has been injected into the veins of animals (by analogy, we might suppose the same thing would result in man), death has resulted from immediate syncope by the direct action of the agent upon the muscular fibre of the heart; in the other, which has succeeded to inhalation, the agent has attained the nervous centres through the blood, by its narcotic and sedative action it has arrested nervous function, and ulteriorly all other functions which depend upon the nervous system for their action, the contraction of the heart has become suspended because its nervous supply has been cut off. Is the blood chemically so altered by the admission and admixture of chloroform as to give an explanation of the modus operandi of its toxic action? That chloroform is present in the blood, and that this fluid is thereby changed in its sensible properties, there can be no doubt; it is not, however,

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with any qualitative change of the blood that is connected the cause of death in fatal cases, it is only considered the medium by which the anæsthetic arrives at and impresses the nervous centres.

Dr. Jackson, and others, think that the toxic action of chloroform may reside in fusil oil, however, this can only be viewed as an opinion, which has not been positively demonstrated. While the fact then has been proved by the interesting researches of M. Gosselin, that when injected into the veins it produces death by an elective and direct action upon the muscular fibre of the heart, there has not been, it must be admitted, a satisfactory explanation rendered of its toxic action when given by inhalation. What are the contra-indications to its use? Exhaustion from great loss of blood, or from severe hectic, though the system may be seriously depressed, and therefore very susceptible to the action of anæsthetics, is not however regarded as an absolute contra-indication to their employment, though such a condition should cause increased care in their administration. Organic affections of the heart and lungs are generally considered to contra-indicate the use of chloroform, and for evident reasons; these are the only implicit and decided contra-indications. As to age and constitution they only enforce double vigilance in its use, for it has been administered to the youngest infant as well as to the most advanced in age, and in the vast majority of instances no ill effects have resulted. There are undoubtedly constitutional idiosyncracies which render its employment inexpedient or unsafe, but it is beyond the power of human ken, however experienced it may be, to detect them, therefore to foresee its dangers. There are but two reliable guarantees against the supervention of accidents, which are sometimes serious and even fatal, which are the purity of the chloroform, and the careful mode of its administration. Has human life been saved by the introduction of anæsthesia? This is a question difficult, in the present state of the subject impossible to answer. Hailed upon its introduction with universal joy and gratitude as an agent which was destined to render invaluable relief to human suffering, and by its beneficial action to diminish the mortality of operations, it was not long ere chloroform, meeting

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with sad reverses experienced some distrust even from those who had most confidently relied on its efficacy. These deaths, fatal results during its administration have not however all been fatal from its action, many of them may we not reasonably suppose have been mere coincidences, in the same cases death might have happened had not the anæsthetic been employed. This appears probable when we consider the innumerable number of cases in which it has been advantageously employed; the deaths are exceptional cases, and in all probability, a fatal syncope would as well have resulted from the shock of the severe operation as to the imputed action of chloroform. We will not deny that chloroform can kill, on the contrary, when administered in a sufficient dose it is as toxic in its action as carbonic acid, or any other poisonous substance, but we will maintain, that when used with those precautions which experience has shown to be necessary, as to the indications of its employment, the purity of the article, and the proper surveillance of its administration, it is generally a safe agent in the hands of the experienced, while in the hands of those ignorant of its effects there is none more powerful and dangerous. When, therefore, an experienced surgeon has observed all the known rules and precautions for its administration, and death results, he cannot upbraid himself; it is impossible for him to foresee those constitutional idiosyncracies which impart to its otherwise physiological a toxic action. When symptoms of its toxic action have manifested themselves, what are the measures which should be adopted to combat them? Is there an antidote to its poisonous action? Equally ignorant of the exact mechanism of its action, and of the changes wrought in the organism by the presence of chloroform, we can only treat upon general principles its toxic symptoms, which surely denote a tendency to death by syncope. It matters not so far as the indication is to be met, whether the syncopal state is primitive, dependent upon paralysis of the heart from the immediate action of chloroform on its muscular fibre, or whether it is secondary, consequent upon the sedative and narcotic action which it exercises upon the nervous centres. In either case, we are to make use of stimulants, to arouse the dormant action of the nervous sys-

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tem; so long as respiration continues, however feeble, and the contractions of the heart persist however weak, we should not despair of reawakening nervous action, even when both have ceased, artificial respiration should be resorted to; for in cases long after the apparent cessation of these functions, life has been aroused. Air reaching the pulmonary vesicles has continued to aerate the blood,—the heart from the stimulus of arterial blood has resumed its contractions,—the nervous centres vivified by arterial blood have had their latent energy awakened, and gradually the organism has returned to its normal state. The treatment of poisoning by chloroform may be briefly summed up in the employment of those stimulant measures which are proper in a state of syncope. The patient, if perchance, he has been chloroformed in a vertical, should be immediately placed in the horizontal position, as much air should be permitted to enter the room as possible, cold water should be dashed upon his face, stimulating applications made to his nostrils; should these means fail, no time should be lost, artificial respiration should at once be employed and persisted in long after all symptoms of life have disappeared. Lately, an interesting article, detailing many experiments on the influence of electricity in the accidents from chloroform, appeared in the Union Medicale, from the pen of M. Jobert, from which it would appear that electricity is the best means of combatting the symptoms of its toxic action. The use of electricity under these circumstances is not new with M. Jobert, in communications which have since appeared in the same journal,—others have laid priority to the claim. From its specific stimulant action upon the nervous system, we would suppose it to be the remedy upon which most reliance should be placed. These experiments are interesting, and conclusive as to its stimulant effects, in cases where the sedative action of chloroform was carried to its utmost, even where the action of the heart was imperceptible, life has been recalled. In cases, however, where the heart had for some time ceased to function, it was unsuccessful in recalling life, which in reality no longer existed. It appears then, demonstrated from these experiments, that whilst air permeates the lungs even imperceptibly, whilst the contractions of the heart continue, though in-

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appreciable, sensation though abolished by the oppression of the nervous system, and myotility though profoundly enfeebled, may be revived.

It is then in the simultaneous use of artificial respiration and electricity, that we should trust for reanimating existence which is apparently lost, and in the majority of cases, however desperate they may be, when these means are timely applied, and perseveringly continued, success will result. Are there any operations, which, from their peculiar nature and site, contra-indicate the use of chloroform? We have already said, that it should not be used in operations about the throat for the evident reason of the imminent risk of suffocation. In a state of insensibility, the rima glottidis is unprotected, and blood falling therein, can produce death by apnœa; if it be employed, it must be used with due regard to the avoidance of this danger.

In its application to operations upon the eye, M. Chassaignac has proved by experiments, two important facts, viz., during complete relaxation from chloroform, the iris remains permanently dilated, and the eye perfectly immovable, two conditions which are indispensably necessary to the operation of cataract by extraction.

Here is a striking peculiarity in the action of chloroform, while from its relaxing influence all the other muscles are in a state of relaxation, these muscles are in a state of tonic contraction, an exceptional and opposite action, which produces on the one hand, dilatation of the pupil, and on the other, immobility of the eye; from these facts, M. Chassaignac deduced its favorable application to the operation of cataract by extraction. These advantages are not without some inconvenience inherent to the action of the agent; we have seen, that vomiting is a frequent result, one which is unfavorable to the operation by extraction, as it might be followed by serious consequences, prolapses of the iris, evacuation of the viteous humor. Dilation of the pupil is easily affected by belladonna, and as to the mobility of the eye, it is no serious inconvenience to the operation. These facts are in harmony with the law of the action of chloroform, that its first effects are upon the life of relation, the functions of organic life are seconda-

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rily influenced. It has been thought that in operations upon the brain, as trephining, chloroform is contra-indicated, this rule is not imperative, since it has been used in this operation with no ill results. In an interesting case of vesical calculus, which happened to Mr. Miller, where the symptoms plainly indicated both vesical and renal disease, which are considered to contra-indicate the operation of lithotomy, he determined to operate, the patient having been chloroformed ; the issue of the case was successful. Mr. Miller presumed that, had the operation been performed without the assistance of anæsthesia, the patient would have died. From its irritant and stimulant properties, M. Maisonneuve has employed it in cases where the tincture of iodine has been found to act beneficially, as in the treatment of fistulæ and sinus, particularly those connected with osseous and articular disease, and I have seen him use it in the treatment of hydrocele. Its action in hydrocele has been promptly stimulant, inflammatory action of the tunica vaginalis soon succeeding, upon its subsidence a stimulus has been given to absorption, exhalation being in abeyance, a radical cure has resulted, as from the use of the tincture of iodine. It is, however, not only in its application to operations that surgery has realized so much benefit from chloroform, it has become an indispensable aid in the precision of diagnosis. Thus, in severe injury of joints, where manipulation is so painful and difficult, that the surgeon is unable to make an examination minute enough to reveal the nature of the injury, he has in chloroform, an invaluable adjuvant of diagnosis; the patient having been chloroformed, the examination is conducted with care and accuracy, the true nature of the injury is detected, diagnosis is enlightened. Be it a fracture, ere the patient has recovered from its anæsthetic influence, it is properly dressed ; be it a dislocation, the relaxed condition of system caused by chloroform is eminently favorable to its reduction. It is indeed in the reduction of dislocations that is particularly manifested its power, from complete resolution all muscular action, voluntary and involuntary is suspended, (which we know is the principal obstacle to reduction) replacement is easily effected, and at the expense of but a small amount of force. Many a case of ancient luxation, which pre-

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vious to the introduction of anæsthesia, would have been regarded as hopelessly irreducible, has been successfully replaced. If, in such cases, unaided by anæsthesia, reduction were essayed and obtained, it would be at the expense of much pain, severe constitutional damage from depletion and sedatives, and great injury of texture from the amount of force and traction required. In the reduction of strangulated hernia, it is an important auxiliary to the taxis, producing muscular relaxation, it facilitates the recturn of the displaced bowel. There are cases of articular disease whose diagnosis is extremely difficult from the pain produced in their examination, and which is necessary for prognosis and therapeutics; this remark particularly applies to disease of the hip-joint, where it is sometimes difficult to diagnosticate coxalgia from morbus coxarius, diseases whose pathological nature is widely different, the one merely neuralgic, the other connected with grave structural changes, here by the assistance of chloroform the nature of the case is enlightened.

In sounding for stone, diagnosis is sometimes difficult, the patient may have all the rational symptoms of a calculus, a sound is introduced, a grating sensation is imparted to both ear and finger, and yet there is no stone. This occurs, particularly in chronic thickening of the coats of the bladder with fasciculation of its muscular fibres; in these cases, exploration is painful, difficult, and requires that the patient be chloroformed, in order that the sensation be accurately distinguished. In the treatment of irritable stricture of the urethra, its assistance is invaluable, annulling pain, it removes a source of difficulty almost insurmountable, viz., spasmodic contraction; and in the treatment of obstinate stricture by forcible dilatation, its beneficial effects are not less marked. I would that space permitted me to insist upon this portion of the subject as its importance demands. I have already trespassed upon your kind indulgence, and trust that the subject imperfectly presented, may be, by discussion, more fully developed.

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Article II.

Case of Yellow Fever occurring in St. Louis, August, 1855.

By Wm. Webb, M. D.

The subject of the contagion and importation of Yellow Fever, still being debatable with the profession, it behooves us to put upon record, all such well attested facts, as may be of service in rendering a solution of this much discussed and important question.

To fully understand any disease, it must be viewed in every possible aspect. We must study its cause, history, nature, treatment, its modifications by individuals, age, sex, temperament, season, climate, country, endemic, epidemic and sporadic. With this object in view, I propose to give a sketch of a case of yellow fever, that has fallen under my observation, hoping that even this mite collected into the treasury of science may not be without some interest in elucidating this abstruce subject. I was called about six o'clock in the afternoon of Sunday, August 14th, to see Mrs. S., an Irish woman, aged about twenty-two years, advanced to the eighth month of pregnancy with her second child; fair skin, light hair, blue eyes, well made, and remarkably healthy—not having been at all sick during a residence of five years in St. Louis, with the exception of a slight attack of intermittent fever some three years since. She has not been absent from her residence on Sixth street, between Franklin avenue and Wash, for many weeks, except to market, a few squares distant—was taken sick the day previous to my visit, just after her return from market, with severe pain in the head, back, and limbs, and fever. Found her about thirty hours after her attack, with considerable fever; skin hot; tongue coated with a whitish fur; pulse 120; respiration hurried; other symptoms not noted as I diagnosed remittent fever. Ordered quinine, fifteen grains; blue mass, ten grains; pulv. opium, two grains.

Monday, the third day of attack, found her up walking across the floor, says that she feels much better; rested well during the night; pulse and skin considered quite natural; did not note other symptoms particularly, though her respiration

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seemed to be greatly embarrassed which was attributed to her situation. Ordered ten grains of the sulphate of quinine, and directed her to keep quiet and in bed. Monday evening—did not see her, but prescribed an oleaginous mixture, as her bowels had not been moved. Was summoned about five o'clock, Tuesday morning to see her, had been very comfortable until about three o'clock in the morning, when she was taken with vomiting; had taken some tea and thought at first that it was only the tea vomited, soon afterwards detected stains on the sheets that looked bloody; says, that "she only spits it up." Found her stupid, though she was perfectly conscious when aroused, and seemed anxious about her condition; no urine for several hours; no stool; pulse 100. The matter emitted looked like an infusion of senna. Ordered an injection of soap and water. Ten o'clock—has had several evacuations from the bowels; did not see them, but learned from the nurse that they were consistent and of a light color; has passed some urine; still stupid, restless, and alarmed about her situation; has been belching up a fluid, every few minutes, in quantities from a tablespoon to a wine-glassful, very much like a strong infusion of coffee, with shreds and flocculi in it; getting darker and darker, every hour; tongue very red, dry, and shining underneath; pulse 100, weaker; skin around the neck and chest considered unnaturally yellow; eyes very much injected and red, tunica albuginea was of a *bright yellow*, and in striking contrast to the injected blood vessels. Now diagnosed yellow fever—12 o'clock, received a vial containing some of the matter then emitted, darker and thicker than before. Two o'clock, met Dr. McPheeters in consultation. She was now very stupid, almost comatose; all previous symptoms aggravated; tongue stained as black as charcoal on the upper part, the rest very red, dry and shining; vomit black as tar, and looked exactly like coffee grounds, was spit up by the cupful, once it was ejected several feet in a stream; yellowness was remarked upon the neck, chest, and tunica adnata, by Dr. McP.; no urine; no labor pains. Diagnosis, yellow fever—prognosis—death inevitable. Gave some general directions, and ordered ten drops every half hour of the tincture of the muriate of iron. Never vomited again. At three o'clock,

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labor commenced, and in a hour she was delivered of a still-born child, small, but well developed; skin natural; no hemorrhage; abdomen flabby; uterus did not contract well. At four o'clock, she was in collapse; skin cold and clammy, pulseless, unconscious, breathed hurriedly and with great difficulty; expired at a quarter to five o'clock. No autopsy.

I handed Professor Cooper, two days afterward, for microscopic examination, some of the matter ejected five hours before death, and he has handed me the following note:

"The liquid is in a state of putrefaction, notwithstanding, the vegetable parasite the *sarcina ventriculi* of Goodsir—the *merismopædia ventriculi* of Ch. Robin—*are seen in great quantity*. This vegetable parasite is not affected by putrescence."

Remarks.—Although the symptoms were not noted as minutely as we would have wished, still enough has been recorded to stamp this at once as a case of yellow fever. We merely state the facts as they were remarked by us and leave them to interpret themselves.

Article III.

Case in which Six Drachms of Arsenic was taken. Hydrated Sesquinoxide of Iron administered. Recovery. By Wm. Webb, M. D., *of St. Louis.*

I was called about ten and a half o'clock, on Suuday night, Sept. 2d, to see Mrs. O., who had been taken suddenly ill. I learned from her, that she had procured from a druggist a parcel of arsenic for the ostensible purpose of killing rats; that owing to a difficulty with her husband she determined to destroy herself. I repaired to the apothecary's and learned from him, that she had procured that evening, about *six drachms* of arsenious acid,—a specimen from the same parcel examined since by a practical chemist (Mr. Brown) is pronounced unadulterated. She states, "that she had eaten nothing all day, except a small piece of meat at dinner, and that she took

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all the arsenic she got from the druggist in half a tumbler of water, while the family were at supper, about six o'clock, and that she did not vomit until eight, and only vomited two or three times before my visit—thinks that she did not get up any of the powder, only water with a little bile.

Found her four and a half hours after the administration of the poison, retching and vomiting bile and mucus; pale, with a dull expression of countenance, inclined to be stupid; skin cold and clammy; restless; pulse feeble and quick, abou 120; violent burning pain in the epigastrium; tongue considered redder than natural. While the antidote was being procured, I vomited her freely with salt and mustard and copious draughts of hot water, and nothing like arsenic in powder was emitted. The officinal hydrated sesquioxide of iron was now near five hours after the administration of the poison given, at first diluted with equal parts of water, owing to the difficulty in getting her to take it in the pulpy state, though in a short time she took freely of the magma in doses of a tablespoonful every ten minutes, she vomiting I think twice, once half an hour after the administration of the first dose, and then some considerable time afterwards.

I learned from the druggist, that she took all he had, about a pound, and I obtained two ounces from another store. The administration of the antidote was continued without any other adjuvants, except occasionally mustard poultices, until about eight o'clock next morning. I saw her at seven o'clock, Monday morning, expression of countenance better; face flushed; skin hot; pulse 108, full; has had several very copious watery evacuations; eyelids very much swollen, and conjunctiva injected; numbness of the extremities; pain in the lumbar region; no urine; tongue quite red; complains of rawness of the throat; great thirst. Ordered mustard sinapisms over the stomach; sulphate of morphia one-eighth of a grain, occasionally; to drink copiously of iced elm water; to be kept quiet. Ten o'clock, symptoms as before; no urine or stool. Six o'clock, fever: pulse full, 120; tenderness over the stomach and abdomen, very marked, though no undue heat of skin; feet numb, and occasionally severe pain running up the legs to the hip. Ordered the elm water and ice to be taken *ad*

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libitum, and to be cupped to twelve ounces over the epigastrium and abdomen; to take the morphia to relieve pain.

Tuesday morning—did not get the cups; took the morphine only twice; much better; has slept well; urine about a pint, natural; no stool; wishes to take some toast, which I forbid; much less tenderness over the stomach and bowels; tongue better; throat still raw; wants to sit up. Ordered her to take nothing but mucilage, and keep quiet.

Wednesday, much better. Ordered an ounce each of castor oil and aromatic syrup of rhubarb, of which she is to take a table-spoonful every two hours until it operates.

Thursday—has had two evacuations from her bowels; very profuse and very black; all her symptoms improved.

Saturday—she is up and looks pretty well, feels well, but is dull and listless; has been out several times; still, has some pain and numbness in her legs; tongue has a white coat around the edges with a red patch half an inch wide in the centre; great thirst, with an insatiable appetite; eye-lids considerably swollen in the morning. Has continued to improve, and is at present quite well.

Remarks.—The points of interest in this case, are, the quantity of arsenic taken, the length of time after, before the administration of the antidote; and the certainty of the antidotal powers of the protoxide of iron. We must suppose from the quantity taken, symptoms, length of time taken, and upon an empty stomach, that absorption of a considerable quantity must have taken place; and the point of vital import in this case is, that if the protoxide of iron did act as the antidote, we may not despair in its administration even after a sufficient time has elapsed for the absorption of some of the poison.

Did the protoxide of iron unite with the arsenious acid in the stomach, forming the insoluble subarsenite of the protoxide of iron? or was the antidotal power exhibited in the blood after absorption? or both?

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ARTICLE IV.

The Influence of the Lunar Phases on the Physical and Moral Man. By P. FOISSAC, *Doctor in Medicine of the Faculty of Paris, Member of the Meteorological Society, President of the Medical Society, etc., etc. Translated from the French by* W. H. TINGLEY, M. D., *Member of the Medical Societies of Philadelphia, and St. Louis, and of the Academy of Natural Sciences.*

Astronomers have demonstrated the influence of the moon upon the terrestrial globe, and reciprocally, the action of our earth on its satellite; but whether its influence extends to meteorological phenomena and their *sequelæ*, involves a far more complex question. We cannot, however, show that lunar phases are not without action on the direction of the winds, and the amount of rain falling. But when we arrive at the organic kingdom the obscurity increases. We vaguely suppose, but cannot prove the influence of the moon on the germination of plants, or on the changes in the leaves of trees. Finally, at the summit of the scale of organized creation, we find man, who though seemingly obedient only to the empire of vitality, is yet submissive to physical phenomena, so admirable and complicated in their character that we cannot accurately determine their extent. In the following pages we shall endeavor to expose with candor and impartiality the accumulated opinions and facts bearing on this interesting subject.

Kerchringuis tells of a French woman whose visage was round and pretty at the full moon, but at the last quarter her eyes, nose and mouth became so changed, that she could scarcely be recognized as the same person: so great was the disfiguration that she never, at such times, ventured in public. The physiognomy remained in this condition, until, by degrees, with the new moon, her former beauty returned. Rèil asserts that children sleep less soundly during the increase of the moon. He, furthermore, asserts, that sailors who sleep in the moon's rays have partial day blindness.

According to Pliny, Tiberius would not allow his hair to be cut excepting at the time of the syzygies of the moon; and Varro recommended, as a preventive of *alopæcia*, that the

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hair should only be cut at the full moon. (*Hist. Nat.* liv. xvi. c. 75.

It has been said that the rays of the moon will darken the complexion; but how can we admit this, when its rays, condensed by a powerful lens, deprived the chloride of silver of none of its original whiteness. Pliny, Plutarch and Macorbius assert that the humidity which the moon causes is the active agent of the decomposition of organic matter.* Nurses are accustomed to protect young infants from the moon's rays, because they have a superstition that they affect the delicate organization of the brain. Those who sleep, for a long time, exposed to the moon's rays are liable to contract inflammatory diseases, because the moisture then present in the atmosphere carries off the caloric of the body too rapidly, thereby disordering the equilibrium of the circulation.

The vulgar have an opinion that the moon produces relaxation; hence, we hear of women invoking its assistance at the period of accouchement. In the Aphorisms of Medicine, by Sanctorius, we read that a healthy man gains one or two pounds at the commencement of the lunar month and loses it towards its termination. Olbers, however, says this is far from being proved. The same writer, after having made close observations, has not confirmed what the poet Licilius asserted, and which has been frequently quoted,—that muscles, oysters, and other shell-fish, are fatter at the epoch of the growing moon than at its waning.

Baglivi reports the following: A young man of high character was affected with an intestinal fistula in the right hypochondrium. He passed by this a quantity of sterenaceous and intestinal matter during the waxing moon, but when the moon began to decrease, the excretions almost, insensibly diminished. This affection was so certain in its course that one could judge of the age of the moon by the quantity passed.

Tulpius, who enjoyed the reputation of a consummate prac-

* This assertion is in the main correct, but it is not elucidated. The radiation of heat from bodies near, or in contact with the surface of the earth, proceeds rapidly, from good radiating and feebly conducting bodies, such as all inorganized matter. This property causes a greater precipitation of the atmospheric moisture on clear nights, when the sky is unclouded, and the moon shines bright; and as moisture is a proximate cause of decomposition, the solution of the question is apparent.—*Tr.*

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titioner, believed, with Baglivi, in lunar influences. He relates the case of a clergyman who was affected with suppression of urine, accompanied by severe pain in the back, at each period of the full moon. This condition lasted until the decline of the moon, it, however, could be relieved by bloodletting.

Of all the opinions concerning the influence of the moon over the human economy none is so generally received as that which concedes to it an important part in the phenomena of the menstrual function, and the organic actions consequent thereto. The term by which this discharge is designated is derived from the Greek, ———. This involves a more ancient opinion than most modern physiologists have retained. Mead attributed the menstrual flow to lunar influence, and in this he followed Aristotle, Stahl, Morgagini, etc. Galen, however, rejected this opinion, and explained it by plethora.

According to Mead, the laws which govern women in this relation, are more readily determined in equatorial regions, because the action of the moon is more apparent, and the menstrual discharge greater than in northern climes. This observer places, also, periodical hemorrhages, in the male, in the same category.

Sometimes there are found coincidences between menstruation and the first quarter of the moon; but when the observations are generalized it can be proved, that a majority of women anticipate or postpone this period, so that it is impossible to attribute this function to lunar influences alone. Some women preserve perfect regularity in the recurrence of this function, but the most present a difference in the day, or the hour. Mead, furthermore remarked, that education and habit of body renders it less sensitive to the operation of physical causes.

Disorder of conduct, and irregular habits, predispose to irregularity of menstruation, in women living in large cities; they are in an artificial world, and are consequently not amenable to the same influences as those who follow the instinct of nature without constraint.

According to Hippocrates, conception is more frequent at the period of the full moon. Has it been observed, however,

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that accouchement is more frequent at the end of the lunation than at other times.

Columelle, Pliny and Palladius recommend that eggs should be placed under the hen at the new moon, so that the increase of light may cause the production of vigorous chicks.

M. Girou de Buzareingues has remarked, that the hatching is more perfect when it occurs near the time of the new moon.

By some writers it has been thought that the duration of pregnancy is governed by the lunar periods. This opinion was adopted by the ancients, especially the astrologers and Chaldeans, and the Pythagorean school. From thence it was propagated among the Greek physicians, Polybius, Dioclesius, Moschius, etc.; and then among the Arabians. The latter believed that children, born in the months containing an even number of days, seldom lived beyond the eleventh month. We know that the duration of pregnancy is nine calendar months, or 270 days;—to this period there corresponds no great astronomical phenomenon; and besides, we cannot determine with certainty the period of conception.

Merriman has noted, for 150 pregnancies, the precise day when the menses ceased; and, accordingly, has been able to determine in what order the various *accouchements* occurred.

5	in the	37th	week,	or	255 to 259	days.
16	in the	38th	"	"	262 to 266	"
21	in the	39th	"	"	267 to 273	"
46	in the	40th	"	"	274 to 280	"
28	in the	41st	"	"	281 to 287	"
18	in the	42nd	"	"	288 to 294	"
11	in the	43rd	"	"	295 to 301	"
5	in the	44th	"	"	302 to 306	"

Here we have striking differences; to what astronomical period, then, can we attribute them?

But if it be urged that education and habit disturb the harmony of nature's laws, let us examine whether these things obtain differently among animals. Tessier, a *savan*, who has made a number of researches on this subject, has found some marked irregularities in cows which carry 280 days; he has

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seen it protracted 41 days, and in mares, which carry 335 days, 84 days.

From the examination of these facts, we may conclude without the fear of error, that the duration of pregnancy, not less than menstruation, is not governed in any appreciable manner by the phases and motions of our satellite. It is necessary, then, to seek elsewhere for the causes of intermittance and periodicity, which are met with in health and disease, in the animal economy.

Of the Influence of the Moon on Diseases.—If we could judge of an opinion by the number and authority of men who have adopted it, we could not refuse credence to that one which attributes to the moon a great influence in disease. We know that such a doctrine was maintained by Hippocrates, Empedocles, Aristotle, Caton, Pliny, Varro, Galen, Cardan, Tycho Brache, Stahl, Guy de Chauliac, Van Helmont, Hoffmann, Baillou, Lind, Mead, Baglivi, Ramzini, etc. But from among these we shall only make a few citations, leaving to the reader to judge for himself of their value.

Fernel and Sydenham have noticed the doctrine of atmospheric influences on the production of epidemic diseases, but without assigning any cause which might have communicated to the air its pestiferous qualities.

"By observing the revolutions of the earth," says Hippocrates, (*De ære aquis et locis,*) "we can calculate the recurrence of the seasons, in their order." Other ancient writers, too, have noted what he has; and although their theories may sometimes be erroneous, their merit as assiduous observers cannot be denied.

Galen (*De diebus decretoriis*) admits that terrestrial things are governed by the planets, and chiefly by the moon. In his age, it was an opinion conceded by agriculturists, astronomers, and philosophers. "By the mutations which this planet undergoes at each septenary, the periods of disease, and all terrestrial bodies are governed; and the most marked changes occur in disease at the lunar conjunctions. They are less in the moon's *uphelion* and during the quadratures."

The doctrine of *crises* has already been a fruitful theme of controversy among medical men. Asclepiades, and the

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Methodist school rejected it with contempt; but to the impartial observer it must seem true, by incontrovertible evidence, that most diseases, especially those of an acute nature, terminate by *crises*, provided their course is not disturbed by perturbative medication. We observe the first favorable change on the seventh day. The observations of Galen, Fernel, Sydenham, and Van Sweiten, equally, show the preponderance of the septenary revolution. Of forty-eight cases of severe fever, whose history Fernel has traced, twenty-two amended on the seventh day, and seven on the fourteenth. The Methodists accused Hippocrates of having founded his doctrine of critical days, not by observation, but by the mystic numbers of Pythagoras.

This philosopher believed he had found, in the combination of numbers, the explanation of the system of the universe. Galen denied the Pythagorian theory, and attributed the access of fever and critical changes to the influence of the lunar phases. "Acute diseases," says he, "have regular periods of seven days for their paroxysms, and their terminations: these phenomena are dependent on the moon, whose influence is chiefly felt at its growing, at its first quarter, and in its full.

From whence comes the veneration, among the ancients, of the number of seven? What determined Pythagoras to adopt it in preference to others? It will be difficult to answer this question satisfactorily. We can observe a curious relation of this number with many natural and invariable phenomena. There are seven notes in harmony; seven colors in the rainbow; seven days in each lunar phase. We also meet with it in religious and civil institutions. The Hindoos and Egyptians were divided into seven *castes*. In the cosmogony of Persia seven *genii* composed the *cortege* of Ormuzd; seven gates were placed in the walls of Mithea; and the sacred fires of the Vestals burned on seven altars. Dejoces, founder of Ecbatana, guarded the city with seven forts. Cadmus and Hermoine gave seven gates to Thebes. It is not in place to decide now, whether, in these divers examples, the number seven was a symbol relating to natural phenomena, or a sort of harmony pre-established. How often does this number appear in the Apocalypse of St. John. "John to the seven churches which

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are in Asia"—"the Mimsho of the seven spirits;" "the seven golden candlesticks lighted, representing the seven spirits of God;" the seven seals; the seven thunders which lifted up their voices; the seven spirits; the seven angels inflicting seven wounds; the seven seals of gold held by seven angels, and filled with the anger of God."

The ancients were so persuaded that epilepsy and certain mental alienations depended on a malign influence of the moon, that they called those lunatics who were so affected. F. Hoffmann, (*De siderum in corpora humana influxu medico,*) Sauvages, and Bruce, (*Voyage to the source of the Nile,*) cite a number of epileptic attacks which occurred at the full moon. Pitcairn states that he knew many women whose epileptic symptoms occurred at the changes of the moon. "I remember," says Mead, "that during the last war with France, I had to treat this disease in many young naval officers, who contracted it during the great mental excitement induced by storm or battle. The power of the moon was so greatly felt that it was not difficult to predict the recurrence of the attacks, at the approach of the new or the full moon." Bartholin relates the case of a young epileptic female, who had on her countenance dark spots, whose color and size diminished according to the different phases of the moon.

A physician attached to the Bicetre is engaged at this time in verifying the relations which exist between the frequency of epileptic attacks and the positions of the moon; but as yet I have not learned the result of his observations.

Charles Pison tells of a young man, who was attacked with previous delirium, which returned at each new moon, for a period of two years,—at each recurrence the attacks diminished in intensity, According to the same author, a young girl was seized, every spring, at the time of the full moon, with hysterical symptoms, which persisted during the whole quarter. After twenty-four hours of excessive irritability she lost the power of speech, and afterwards laid two days in a soporose condition. From this time until the end of the lunation, she was highly susceptible to external impression and sleeplessness.

Pitcairn tells of a young red-haired girl, in good health, but

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whose menstruation was deficient, who had been subject to attacks of hysteria, since the age of four years. The attack returned regularly at the new and full moon. A girl five years old was attacked with chorea the day before the full moon: on the following day the disease passed off, but she lay for some time in a comatose state. The paroxysms of the disease coincided with the changes in the moon and the tides. At the time of the flood-tide she became speechless and unconscious, but when it ebbed she regained all her faculties. The father of this child lived on the banks of the Thames, and being an attentive observer, he could easily verify the coincidences. He observed that the condition of the malady was subordinate to that of the waters, whose movements he so carefully watched. The singular state of this child persisted fourteen days, until the new moon. A final cure was obtained by the *moxa* and purgatives, (Mead *op. cil.*) It was during the full moon that Boyle observed the most violent cephalalgias; Lepois' cerebral congestions; and Wepfer's severe and sudden apoplectic attacks. Van Helmont, Floyer, Bennett, and Antonio Franzeri, pretend to have observed remarkable coincidences between the lunar periods and asthmatic paroxysms. One of the most singular facts is found in the Memoirs de l'Academie de Madrid: it is a case of dyspnœa, which for many consecutive years came, periodically, at the time of the new and full moon. Hemorrhages and some of the *neuroses* seem to be influenced by the moon's phases. Musgrave (*Philos. Trans.*) relates the case of a young man, who, from his earliest infancy until the age of twenty-four years, had a hemorrhage from his left thumb; the quantity of blood which he passed was about one hundred and twenty-five grammes, which increased to two hundred and fifty after the age of sixteen years. To arrest this inconvenient discharge the arterial cautery was applied, but with the effect of inducing a grave and rebellious hemoptysis.

Mead was consulted by a young man, of a delicate constitution, who had for six months, at each new moon, a considerable discharge of blood from the lungs, which lasted four or five days, and then decreased. Pitcairn relates a fact not less remarkable,—one of his patients was attacked, towards the age

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of nine years, with severe epistaxis, followed by pain in the arms and loss of consciousness. When consciousness returned his fingers were insensible and his arms agitated with violent convulsions; then he lost the power of speech. These accessions came regularly every year, in the months of March and September, at the epoch of the full moon. Nearly all the English physicians have noticed an influence of the lunar phases in the febrile excerbations of tropical climates. Cleghorn observed it at Minorca, Jackson at Jamaica, and Lind and Balfour in the East Indies.

"At the time of the equinoxes," says Balfour, "when the attraction of the sun is added to that of the moon, from whence the great tides result, diseases are frequent and more pernicious, their strength more terrible, and their mortality more considerable." According to Lind, the period of the full and new moon is the proper time to determine the invasion of intermittent and pernicious fevers. This is well known to the inhabitants of the Indian peninsula.

During the pestilence which ravaged Noyen in 1636, Dimerbrock says the malady exercised its greatest ravages at the approach of the new and full moon, and nearly all those attacked at this time died.

Ramazini, in his work on "Epidemics," of the years 1692, 1693 and 1694, relates, that a pestilential fever, with *petechiæ*, ravaged the state of Modena. "This fever," says he, "augmented in violence after the full moon, or rather at the last quarter, and only decreased with the next moon." Others have noticed the same facts as these; and it has contributed somewhat to a knowledge of prognosis and treatment.

If the divers aspects of our satellite haveany action whattever in the invasion, the severity, and termination of disease, he success of our treatment may depend on a proper knowledge of the lunar phases.

Hammet, writing to his friend Leuret, asserts that the only treatment employed in the mental diseases of Egypt, consisted of balls of the flesh of a serpent very common in that country, to be taken at the period of the full moon. Warrich, Professor of Clinical Medicine in Vienna, is the author of a very rational method in the treatment of tænia. In 206 cases, he

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cured 151; but he recommends it to be followed during the waning of the moon.

Mead advises the administration of antispasmodics in those nervous diseases which seem to be affected by the lunar phases, and quinia in hemorrhages depending on the same causes.

If it has been here shown, that during the various phases of the moon, certain diseases, apparently depending on that planet for their peculiarity, are engendered, the physician should be careful how he disturbs the order of nature by perturbative treatment. In such cases, the expectant method is to be preferred. I have seen grave symptoms redoubled in intensity by perturbative medication; so much indeed that a change in the phase of the moon has alone caused a favorable termination. It must be admitted, that there is an insufficiency of testimony to either confirm or overthrow the opinions which writers have adopted on this complicated subject. There are certainly in the assertions of many authorities errors or illusions; for example Adolphus was celebrated for his treatment of the itch. This treatment consisted in four vigorous frictions of the body, with a pomade, composed of powdered juniper berries, laurel and flower of sulphur, mixed with salt butter; to be commenced when the moon is *waning*. Although he performed many cures, is it to be believed, that the influence of the moon had any power in effecting them? Undoubtedly not. M. M. Bazin and Hardy have, for many years, cured inveterate cases of itch by the same treatment, at all periods of the moon. The observations which have been already made are not precisely or numerically sufficient to decide the important question of the *influence of lunar phases on disease.*

But when we find a number of writers who have adopted a certain opinion, they should not be entirely rejected without a personal examination. Experience can alone decide the truth or falsity of such questions. Olbers, the Bremen astronomer, whose reputation even yields something to the opinion which he combats, says, "I have always been attentive to this subject, in its connection with various diseases, during my long practice of medicine, and I have not remarked any influence of the moon's phases on accidental injuries, in dropsies, in

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paralysis, in epilepsy, or any of the *neuroses*. Notwithstanding, I could not deny, in the face of so many old and authoritative observers, all influence of the moon's position in relation to the sun, in some rare affections. Among all the means which we may employ to detect the influence of natural agents, none are so susceptible as the nerves, especially when their sensibility is wasted by disease. In such cases, causes otherwise inappreciable exert a manifest power. It is by the nerves that the feeble electricity developed by the contact of two metals is detected. The action of the moon, in its relation to the sun, may be but feeble, on the earth; but in attacks of epilepsy and its congeners, the relation may become more apparent.

If, as Balfour has asserted, there exists a connection between the tides and the invasion of the endemic fevers of India, and their *crises*, we may admit a luni-solar influence on their production.

"For my part," says Arago, "I am very much disposed to acknowledge the influence of the moon in the causation of disease; but I desire to see a fuller examination before giving a final opinion against arguments drawn from the experience of astronomers and scientific physicians, and against the effects of the chemical or calorific rays of the moon; for it is not proved, that these are the means by which this planet influences organic bodies." "Besides, the nervous system is a far more sensitive instrument than any of human design. Who does not know the effect produced on the olfactory nerves by odoriferous particles, whose chemical analysis is beyond our knowledge." "For another example of this exquisite susceptibility, let us take the feeble rays of moonlight, which, even when highly condensed, show no traces of heat on the most delicately constructed thermometer, nor chemically on the chloride of silver. Yet they cause contraction of the pupil." "These mysterious phenomena show how reserved we should be in judging of effects on inanimate objects; they are different on beings endowed with life."—[*Ann. de Bureau des longitudes*, 1832, *p.* 244.]

We have now reduced to narrow limits the influences which the positions of the moon, relative to the suns exercise on the

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human body, in health and in disease. We have observed that neither Olbers nor Arago deny some effect on the human constitution, more sensitive by far than those detected by the chemist or philosopher. Bagliri acknowledges planetary influences in the atmospheric changes, but he does not say whether they operated by changing the quality of the air itself, or by virtue of an altered pressure. It may be that we shall, at some future time, discover causes which, until the present, have escaped our observation of the influence of the moon on the *morale*.

If, as some physicians and observers have asserted, the moon exercises even a slight influence on the human organization, it can only be through the medium of the nervous system to which the *morale* is subservient. But in relating a number of facts which appear favorable to this doctrine, it will be necessary for us to decide whether they are produced by physical action, or are simply the results of the imagination. In some of the examples which we shall cite, there will be found some superstitions which seem to control our destinies. Coste, th translator of Mead's works, and physician in chief to the "In alides," recognizes physical causes on the science of horoscopes. According to this *savan*, the degree of force which the sun and moon exert on the air, at the moment of our birth, is one of the causes which determine the special temperament of each individual.

"Can any one persuade himself," says he, "that it is indifferent whether we are born in summer or in winter, in the country or in the city, by day or by night, in clear or in cloudy weather? For myself I do not hesitate to believe that the circumstances which accompany the first inspiratory movements govern in a great measure the perfection or imperfection of our organs."*

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*In the prize essay on suicide M. Cheveau has sought to determine whether the phases of the moon had any influence on suicide. He has decided from a number of facts that the moon exerts no influence whatever. The greatest number were found at the full moon. M. Cheveau has divided the lunar month into three nearly equal periods of nine days.

	From the 1st to the 9th day.	From the 10th to the 18th.	From the 19th to 25th.
At Provence, 1842 to 1845,	4 suicides.	9 suicides.	1 suicide.
At Alencon, 1842 to 1846,	9 suicides.	5 suicides.	11 suicides.
Obs. of M. Casauvielli,	8 suicides.	12 suicides.	4 suicides.
	21 suicides.	26 suicides.	16 suicides.

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Eclipses are the astronomical phenomena which, in all ages, have produced most vivid impressions on the minds of men. Ramazzini states that during the eclipse of the moon in January, 1693, the mortality among the sick was greatly increased; and many cases of sudden death occurred. According to Mead, on the day of the total eclipse of the sun in April, 1725, all the cases of disease were exacerbated.

Baillon relates the following: A number of Parisian physicians were called in consultation to the case of a woman of high rank, at the time of a solar eclipse, but so lightly did they regard her case that they walked out to view the sky. They were, however, quickly recalled, to see her in a comatose condition, which continued until the sun had regained its natural brilliancy. According to Matthew Faber, chief physician to the Duke of Wurtemberg, a hypochondriac, who was usually very peaceable, became, at the time of a solar eclipse, first extremely sad, and afterwards so very furious that he sallied out from his house with a drawn sword and struck down all those who opposed him. The last example which we shall cite can be explained, perhaps, by the influence of an exalted imagination; but it seems impossible to attribute to the same means the mortality which Ramazzini has noticed. The learned Valesnieri being at Padua, recovering from a long attack of illness, was taken, during an eclipse of the sun, with symptoms of prostration which had not marked any period of his disease. According to Rawley, Lord Bacon fell down with syncope during an eclipse of the moon, and did not recover until the moon's disk was again clear. One of my own patients has been singularly affected during an eclipse of the moon. As soon as the obscuration commenced, her respiration became slow and her pulse weak; at a more advanced period her pulse rose, but her respiration was almost suspended. Then she fell into a state of utter unconsciousness, without any motion whatever. As the moon passed out of the earth's shadow, these symptoms gradually disappeared; and after the eclipse had terminated she felt no traces of the disorder. This case has some analogy with that of Lord Bacon. These facts can scarcely be attributed to the imagination. "It will be necessary," says Arago, "to prove that weakness of character and pusillanimity are associated

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with eminent qualities and intelligence, before we can explain these affections on the ground of strong imagination." He furthermore, tells of the large number of sick who were shut up by order of a medical council, in well closed and well warmed chambers, that they might escape the pernicious effects of a solar eclipse.

Petit relates that, during an eclipse, the peasantry in the vicinity of Paris were so alarmed by this phenomenon, that they overran the houses of the clergy, in seeking confession.

The advancement of science has dissipated certain prejudices which in the earlier periods of history had obtained considerable force. This we can prove by the two following examples:

"At sunset," says Cæsar, (*De bell. Gall. L.* 61.,) "Arrovistus called back the troops after much loss, and some of the prisoners being asked why he refused to continue the battle, replied that it was a custom among the Germans to wait until the women interrogated the future to know the proper time for battle. They declared that the Germans could not conquer before the new moon."

A similar superstition prevented the Spartans from engaging at Marathon. "At the approach of the Persians," says Herodotus, "the Athenian Generals sent to Lacedæmon for assistance; but the latter decided that it would be impossible to take the field before the full moon." This testimony is confirmed by Pausanias and Lucian, who attribute the law to Lycurgus.

Among all these people, eclipses were viewed as the announcement of heavenly wrath. During the reign of Louis XIII. and Louis XIV., the total eclipse of 1706 filled with terror the French army then besieging Barcelona. Herodotus relates that in the bloody war between the Medes and Lydians, under the reign of Alyatus, father of Croesus, the two armies were in hand to hand conflict, when suddenly, by an eclipse of the sun, day was changed into night. Both sides being struck with terror, ceased the combat, and concluded a peace. Herodotus, Diogenes, Laertes, and Pliny agree in saying that Thales, of Miletus, predicted this eclipse on the one hundred and forty-second year of the forty-eighth Olympiad, which corresponds to the hundred and seventeenth year of Rome.

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"History," says M. Francœur (*Managraphie* 7, 93) "abounds in examples of fright caused by eclipses, and of danger produced by ignorance and superstition."

Nicias had resolved to quit Sicily with his army, but being alarmed by an eclipse of the moon, he temporized for several days to assure himself whether the stars were favorable to the event. This delay caused his defeat, and the entire destruction of his army; and from this time the ruin of Athens may be dated.

Adroit men have in all times used the superstitions of the masses for their own aggrandisement. Christopher Columbus, when reduced by famine among the savages of his newly discovered country, announced to them that the lights of the moon would soon be extinguished. The eclipse commenced, and so great was their terror that they gladly provided him with whatever he demanded.

"Drusus, [Tac., Ann. I. 28,] appeased a sedition in his army by predicting an eclipse of the moon; and according to Titus Livy, Sulpicius Gallus, in the war of Paulus Emilius against Persia, used the same stratagem. Alexander, when near Arbella, was forced to use all his address to calm the terror of his troops caused by an eclipse. Great men, sooner than yield to unfortunate circumstances, turn them to their own profit.

We have seen what influence our satellite, placed at a distance of 240,000 miles, exerts on the seasons, and on organic matter; how its influence together with that of the sun causes that movement of the earth on its axis, known as the *procession of the equinoxes*, or the revolution of 25,867 years. Is it then necessary to speak of the influence of the other planets whose distance is reckoned by millions of miles? *Sensum ingentia spatia sunt.* It is above our most comprehensive knowledge to measure the immensity of space.

The ancients assigned to the planets a greater power over our globe than they deserved, because they were ignorant of their distance from it. To admit an influence of the stars over our globe, would be retrograding to the time of the Chaldeans, the astrologers of Rome, and the absurd superstitions of barbarous nations. Nevertheless, among the ancients, and even among the moderns, astrology and the science of augury have

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reckoned many partizans among men of letters. Plotius, the celebrated master of Porphyry, in his treatise, [*Si jaciunt astra,*] denies to the stars all influence over the destinies of man; but he acknowledges that future events may be predicted by the flight of birds, and the motions of the planets.

"Who shall deny," says Statius, [Theb., Lib., VI.,] "that omens unveil the secrets of the future? Destiny is revealed to man, but he neglects to consult it, and loses the benefit of the celestial prognostics." If we wish to interrogate history, we shall often find not only vulgar, but cultivated minds, which are troubled by the most ridiculous presages.

Some historians declare that the appearance of the comet of 1556 caused the abdication of Charles V. In 1524 Francis the First, the restorer of letters, appointed the celebrated Agrippa physician to his mother, Louise of Savoy; but he having refused to consult the stars, on the future destiny of France, was obliged to seek refuge, by flight, in Anvers.

It is stated that the brilliant destinies of Louis XIII. and Louis XIV. were predicted by the state of the heavens.

Article V.

Cogitations and Vaticinations.—By An Old Fogy.

In these latter days of Young Americanism, Young Irelandism and Young Physic, all who revere the past in art, science and religion,—who cannot accept in their full extent all the daring speculations and hasty conclusions of the self-styled men of progress,—who believe that Jesus Christ was a greater personage than Andrew Jackson Davis,—who contend that Plato, and Aristotle, and Lord Bacon were at least equal to Swedenborg and Judge Edmonds,—who look upon Hippocrates and Galen, and Sydenham, and Rush as greater philosophers than Lebert and Robin,—who regard brains as of more importance than the microscope,—who think that there are other ways o employing time equally as profitable as in counting the number of stigmata on an insect's back, or measuring the length of a flea's hind leg,—who regard the mighty thoughts of great men

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as of more importance than the *microscopic* additions to science effected by modern plodders,—who possess a degree of modern scepticism that cannot swallow conviction in lump and gain remote conclusions at a jump,—who believe, that men knew that blood is blood before the microscope revealed its corpuscles,—that tubercle is tubercle before its appearances under the microscope were familiar to observers,—that yellow fever was as truly diagnosticated before as since the detection of sarcini in the black vomit;—all such men are now a days called Old Fogies. I am an Old Fogy. I believe that our ancestors, our fathers, knew something. I believe that a great deal of what is called progress, is nothing but gyration, resembling the progress of the dog that follows his own tail. I doubt very much that we treat disease much better than did Bœrhaave and Sydenham. I do not deny that some advances have been made in the details of science within the last hundred years. I would not underrate them; but I do not wish to overrate them. What discovery of the last twenty years can rank with that of the power of vaccination in preventing small pox, or of the circulation of the blood? None, not even chloroform. Chemistry, so far as it bears on the nature and treatment of disease, is yet in its infancy. That it will effect a great deal, I verily believe; that, as yet, it has not done a great deal, may be safely asserted. The Old Fogy knows enough to hope for more; but he is not blind enough to believe that the consummation of science is close at hand. He believes that ages will be required to effect what the ardent *Know Nothing* thinks already effected. Old men *know* what fools young men are, whilst these latter *think* old men fools. Let us estimate briefly and honestly what the microscope has done for science. I do not deny that it has done a great deal for science in general. It has enabled men to see and classify beings too small to be observed by unaided vision. It may be said that it has revealed the elementary structure of animal and vegetable tissues. I do not deny the value of the microscope in science; but curious and interesting as this instrument may be, it cannot do every thing. It would be doing it a serious injury to over-praise it. Physicians cannot restore life to the dead by microscopic examination. They cannot tell, by looking through the microscope, whether a given

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substance is poisonous or edible; they cannot tell, by microscopic examination a very great deal about the diagnosis of disease. I do not say that nothing can be learned in this way,—I wish more could be learned,—but the fact is that the microscope is, as yet, at least of no great utility in diagnosis. It is true that we can detect the different salts of the urine by their peculiar crystals, and certain vegetable fungi in some diseases of the skin; we can find vibriones and sarcini in the ejecta of certain diseases; but in the diagnosis of disease, in the proper sense of the term, the microscope is of secondary utility, to say the most of it. It has been said of late years that pathological products, as tubercle, cancer, etc., are distinguishable by the microscope, and that this instrument is the only infallible means of determining whether, or not, a given morbid product is cancerous. It has been contended that there is one form of cell in tubercle, another in cancer, another in epithelioma, and so on; in a word, that every growth and deposit had its proper and peculiar microscopic characteristics, by which it may be always distinguished from every other tumor or deposit. All that you had to do in order to know the nature and name of any morbid product with which you might meet, was to send it to a microscopist, and you would learn by the return mail. If you saw tubercles in the lung, you were not to believe it really tubercle until it had the imprimatur of some microscopist. If you saw a cancer or malignant tumor, you were not to believe it malignant, (though it might have killed the patient,) until the nucleated cell was found in it. If you extirpated the most benign growth, you were required to quake in your shoes, until the far-seeing and solemn micrograph announced the fact that the nucleated or nucleolated cell was absent. Wo to the patient! no odds, how mild and benign the disease, if it contained the fatal cell; his fate was sealed. The micrograph will tell you that hygieia and all the demigods and doctors cannot prevent the return and fatal termination of the disease. To be sure, and it is consoling, he will admit that the disease may delay its return ten, fifteen, fifty, and perhaps a hundred years, or something amounting to this. Oh no! The Andrals, the Velpeaus, the Broussus, did not even know what to call the tumor they met with. The pathological products they en-

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countered, until they called on a Lebert or a Robin! The internes got ahead of their masters by the aid of a philosophical toy; all previous observation was null and void and useless in disease, because the diagnosis had not been verified by the microscope; the classification and nomenclature of ages were to be thrown overboard to give place to the crude ideas of a few Red Republicans in science. Now, what I mean to assert is this, that the microscope is of mighty little use in the diagnosis of disease generally, and of morbid products in particular. By means of the microscope we may find sarcini in *black vomit*, but we have diagnosticated the *black vomit before* we discovered the sarcini. We may find disintegrated cells in tubercle, but we know the product to be tubercle as well before as after this discovery. We may find the nucleated cell in cancer or malignant tumor; but we already knew by other signs that the tumor was malignant, and neither the presence nor the absence of the cell would change the diagnosis, prognosis or treatment of the case. But can we not learn much about the ultimate structure of morbid products by means of the microscope? Certainly. There is no other way of learning the appearance of microscopic objects than by the microscope; but what I mean to say is, that the knowledge thus acquired is of no great use in diagnosis. The chemists might ask with some show of reason,—and the chemists had their day of self-conceit as well as the microscopists,—the chemists might ask how can you diagnosticate these morbid products, these pathological epigeneses, these *neue Bildungen*, these pseudo-plasmata, without knowing the kind and proportion of the elements constituting them? Certainly these ultimate elements can be revealed only by chemical analysis; but, as in the case of the microscope, the crucible throws no great light on the *morbid nature* of these products.

Disease is but a variation from health. It is classified and estimated and diagnosticated by its symptoms and signs its march and its termination. It consists of every variety of shade and degree, from the slight malaise to the torturing spasm, from the scarcely appreciable change in a part to the sloughing carbuncle or cancer. It is complicated in kind, and ever-varying in degree. Its mutations of quantity and quality defy the scaf-

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foldings and arbitrary sections and divisions of system-makers and nosological closet-dreamers. To-day it is slight, to-morrow it is grave. This week it has an effused, but not yet organized plasma; next week it has cells, the week following fibres; this month its products are organized, next month they are disintegrated and form an amorphous mass. Disease is a greater or less change in the organization. It is not a new organization out of different material; it is the normal, the physiological material changed in quality, changed in the time or place of its appearance. Diseases are not entities as some of the microscopic gentry seem to suppose; they are but variations of one entity. Now, if diseases were entities, were things separate from the system which get into the system and there grow and congregate,—if diseases were material objects like minerals, plants and animals,—then they might be diagnosticated by the microscope. In fact, they could be diagnosticated in no other way, if they were too small to be seen with the naked eye, or by the aid of a pair of spectacles. We distinguish a navicula attenuata from the cornea of a fly's eye in no time by the microscope; so we could diseases, if they were entities as different from each other as the objects above mentioned. I, for one, had thought and hoped that these old exploded ontological notions were safely entombed in the sepulchre of all the defunct theories. I had no idea that they would be revived and re-discovered by men who pretend to progress and to be wiser than their fathers. As, however, the microscope is now in vogue, and as its claims are based upon these old fashioned country notions of entities, ontology must be galvanized into a sort of half existence to stagger a brief hour on the stage, and then go down to the second death to which common sense and a moderate degree of medical knowledge will doom it. Talk about a certain cell being always present in tubercle, a certain other cell being always present in cancer, a certain other cell being always present in epithelioma, a specific cell for warts and corns, and another for chancres, a certain fibre characterizing a particular tumor ab initio ad finem, and of the unalterability, the fixity of these things. My dear microscopic friend, this is all false; this is no better pathology than that of the countryman, of whom Watson speaks in his "practice of

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medicine." The countryman, speaking of the ague, said that he had never seen it but once, and then it was vomited up by a friend of his, and that it looked like the white of an egg or a piece of jelly. The countryman, you see, was an ontologist. Lay aside your microscope and reason awhile, my ardent friend; put forth the power of your mental eyes before you put out your physical ones, and you will see that all these pathological products termed separate diseases are made of the same material, of the same cells; that the amorphous blastema is changed into the granule, the sac, the nucleated cell; that the cell is changed into fibres, and so on; and how far the organizing process may proceed, will depend on a variety of circumstances. All these forms of organization may occur wherever the fluid plasma is effused in tubercle and other deposits as well as in tumors, in the mild as well as the malignant. Do not throw away your microscope, my friend; do not underrate it; but do not so overrate it as to bring it into the disrepute which awaits all overrated things.

Thus we may reason a priori; but what are the direct facts as to the utility of the microscope in the diagnosis, say of tumors for example? Why, the facts show that the microscope is just about of no service at all. Velpeau sent tumors of the most malignant kind to the best microscopists of Paris, and no so called cancer cell was to be found in them. That these were cancers, (using the term *cancer* in the sense of *malignant tumor*,) was clear from their appearance, the state of constitution in which they occurred from their recurrence, and finally from the circumstance of their fatal effects on the system. Velpeau sent also to these micrographs benign tumors in which they did find the so called cancer cell. This happened not in one or two cases only, but in many; so that it has been clearly established by direct observation that cancers may not have the so called cancer cells, and that non-cancerous tumors may have them; so that the conclusion is irresistible that the cell is not diagnostic of cancer. This is irrefutably shown by the recent debates on the subject in the Academy of Medicine in Paris, reports of which have been published in the "American Journal of Medical Science."

And is it, then, the general opinion of pathologists who are

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adepts in the use of the microscope, that there is a specific cancer cell, a specific tubercle cell, and so forth? No! by no sort of means. The vast majority believe no such thing; the most distinguished micrographs teach the contrary doctrine. Amongst these may be mentioned Virchow, Vogel, Gluge, Bornett, Paget and Mandel. I know of no microscopist, worthy of the name, who contends for the specific cell, except Lebert, Broca and Robin. Mandel says that there are cellular cancers, epithelial cancers, and fibrous cancers. The notion that the various tumors and deposits are distinct species, is, as I have already said, founded on that false doctrine that diseases are entities as distinct and classifiable as animals and vegetables. It is founded not on physiological and pathological knowledge, but the want of it. There can be no such thing as species in the deposits and tumors, for they are all the same in origin; the same plasma is the fountain source of the whole of them; they shade off into each other, they run into each other; they change from day to day and from month to month. Physiology and pathology are the lamps by which the physician and surgeon are to be guided in the diagnosis and treatment of disease; and I confidently predict that, in the presence of these increasing lights, the fond theory of specific cells will vanish with the darkness in which it was engendered.

PART II.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

Article I.

Surgical Reports and Miscellaneous Papers on Medical subjects. By George Hayward, M. D., *President of the Massachusetts Medical Society, Fellow of the American Academy of Arts and Sciences; late Professor of Surgery in Harvard University, &c., &c. Boston*—1855—*pp.* 452.

Most of the papers—twenty-two in all—constituting this handsome duodecimo, have heretofore appeared in the medi-

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cal periodicals of the day, and they are now collected and presented in their present form for the benefit of students and young practitioners. They are valuable for the facts and statistics which they contain, and may be read with profit by older as well as younger members of the profession. Dr. Hayward stands deservedly high as a judicious surgeon and a clear and vigorous writer, and the position which he has so long and so ably filled as surgeon to the Massachusetts General Hospital—one of the best institutions by the way in the country—has given him ample opportunities for clinical observations.

The first two chapters are occupied with surgical cases and operations occurring in the Massachusetts General Hospital, from May, 1837, to March, 1841, inclusive, in which are detailed a number of cases interesting to the surgeon as well as to the general practitioner, while the remaining twenty chapters contain short treatises on miscellaneous subjects, such as the following: Diseases of the Knee Joint; Statistics of Amputation; Division of Tendons; Wounds received in Dissection; Remarks on Anæsthetic Agents; Remarks on Burns—on Measles—on the Contagiousness of Cholera—on the Mineral Springs of Virginia, &c., &c. The reader will find it both an agreeable and suggestive work.

To be had at Halsall's, Main street.

ARTICLE II.

The Diseases of the Heart and the Aorta. By WILLIAM STOKES, *Regius Professor of Physic in the University of Dublin; author of the Treatment and Diagnosis of the Diseases of the Chest, etc. Philadelphia—Lindsay & Blackiston—pp.* 710; 1855.

The name and fame of Dr. William Stokes are familiar to the profession of this country, and he is universally acknowledged as one of the ablest and soundest, if not the very first clinical teachers now living. With his cotemporary, Dr. Graves, he has contributed to render the Dublin school pre-eminent among the practical schools of the old world. Those

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who are familiar with his able treatise on the "Diseases of the Chest," will be at no loss in appreciating the value of the present work. His very name is the surest guarantee that could be given of its eminent practical character, and of the soundness of the views expressed.

The author has not undertaken to compass the whole round of cardiac pathology, but has rather sought to embody the results of his own clinical observations, which have been continued almost unremittingly for upwards of a quarter of a century, to convey to others the state of his own mind, the conclusions to which he has arrived, as well as the doubts and difficulties which he had been unable to solve or remove. Such a work exactly meets the wants of the ordinary practitioner of medicine, and by such it will be eagerly sought. It is divided into twelve chapters, as follows: On Inflammation of the Heart and its Membranes; Diseases of the Valves of the Heart; Diseases of the Muscular Structure of the Heart; Weakness or Defective Muscular Power of the Heart; Fatty Degeneration of the Heart; Treatment of the Organic Diseases of the Heart; on the Condition of the Heart in Typhoid Fever; Displacements of the Heart; Rupture of the Heart; Diseased Action of the Heart; Aneurism of the Thoracic Aorta, and Aneurism of the Abdominal Aorta.

To be had at Edwards & Bushnell's, on Fourth street.

ARTICLE III.

The Mineral and Thermal Springs of the United States and Canada. By JOHN BELL, M. D., *author of Baths and Mineral Waters; Baths and the Watery Regimen; Lectures on the Practice of Physic, &c., &c. Philadelphia; Parry & McMillan, successors to A. Hart, late Carey & Hart*—1855.

This work cannot fail to be useful to travelers in quest of health, as well as to physicians who may wish to know the chemical properties and medical virtues of the different mineral springs with which our country abounds, in order to enable them to direct their patients aright in their summer wan-

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derings. Dr. Bell is eminently qualified to do full justice to such a subject. Whatever he undertakes he does thoroughly, and then, too, he possesses a vast fund of information, professional and scientific, which, by patient observation and long application, he has brought to bear on this important topic. We take pleasure in commending this little volume, both to the profession and to the traveling public—with the latter it should be a *vade mecum* in their summer excursions.

ARTICLE IV.

The Book of Prescriptions, containing two thousand and nine hundred prescriptions, collected from the practice of the most eminent Physicians and Surgeons, English and French—comprising also a compendious history of the materia medica of all countries, alphabetically arranged, and lists of the doses of all officinal or established preparations. By HENRY BEASLEY. *Philadelphia; Lindsay & Blackiston*—1855.

This little volume appears to be a re-print of an English work, without being conformed in all cases to the standard of strength for the various preparations as laid down by our pharmacopœia, and such as are universally used in this country. In it are to be found many useful formulæ which may be conveniently resorted to in extemporaneous prescription. In most cases, the name of the author of the prescription is appended, as well as the disease in which it is applicable. The alphabetical arrangement adopted is convenient, and each leading article is prefaced by a short account of its nature, origin and therapeutical properties.

Such works are doubtless useful to young practitioners, upon the same principle that crutches are useful appendages to those who have not the full use of their legs, but, like these, should be dispensed with so soon as the disability which they are intended to relieve has been overcome; but when exclusively relied on, they do harm instead of good, by preventing originality of combination and independence of thought. Every well educated physician should be so thoroughly acquainted

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with materia medica and therapeutics as to be able to combine and graduate his remedies to meet the various and ever changing indications presented by disease as it occurs at the bed-side; and the sooner he learns to rely on himself in this respect the better it will be for him. We can therefore recommend this work to young beginners, as well as to those who feel conscious of either a want of knowledge, or want of tact in prescribing.

To be had at Edwards & Bushnell's, Fourth street.

PART III.

RECORD OF MEDICAL SCIENCE.

On Albumen as a Cholagogue. By Dr. R. Giesbler, *of Gottingen.*

I am anxious to call the attention of the profession, briefly, to the employment of the albumen of hen's eggs in certain forms of jaundice.

Bernard's experiments, showing that this substance is assimilable only through the intervention of the hepatic function immediately suggested to me the idea that in albumen we might find an adequate excitant of the liver. I inferred, first, that fatty nutriment, and in a higher degree albuminous articles of diet, must be avoided in inflammation of the liver; and secondly, that in torpid conditions of that organ we might possess in albumen a remedy capable of stimulating it to increased activity. If to the liver be assigned the task of rendering albumen adapted to assimilation, this substance must be a stimulant of it, which will, *mutatis mutandis*, set its function to work in the same manner as the administration of saline medicines does that of the kidneys. It is scarcely necessary to add, that the establishment of these results by experience must secure to albumen not merely the character of an adequate stimulant, but also pre-eminence over all other so-called cholagogues, since the action of the latter is very uncertain.

I think it unnecessary to demonstrate the remarkable efficacy of albumen in this respect by the recital of cases, since it was, as I soon learned, already known to our predecessors. It,

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however, appears to me not unimportant to point out the source whence it would appear the recommendation to employ albumen as a remedy in jaundice was originally derived. Charles White, in his work on "The Treatment of Pregnant and Puerperal Women," states, that he once suffered for several weeks from jaundice, and was very much reduced. Soap, aloes, iron and rhubarb had been taken without the least benefit. A navy officer, happening to visit him, assured him he would cure him in a short time. He told him, in fact, that while on a voyage some time before, he was attacked with the same disease, and had in vain used the remedies prescribed by the surgeon of the vessel. A Spanish physician of the island of Minorca then advised him to take every morning, while fasting, two raw eggs, both yolk and white, in a glass of water, and to repeat the dose with one egg every four hours during the day. He followed this advice, and in three days his motions were again colored with bile. White tried the plan suggested, and found the effect attributed to the albumen to be confirmed; in three days the fæces were colored, which they had not been for six weeks before. He continued the use of the egg for some months. He subsequently recommended the remedy to several patients, and always with good effect, except in cases in which the jaundice proceeded from the presence of gallstones. So far for the testimony of Mr. White. In the more modern treaties of therapeutics I have not been able to find any allusion to this application of albumen; the present communication cannot, therefore, be considered superfluous. A few of the older works recommended, not white of egg, but the yolk, probably on account of its yellow color. It is indeed possible that the action of the liver may be excited, not by the vitellin of the yolk, but merely by the albumen of the egg, with which Bernard experimented, and which White recommended in jaundice. Should this supposition prove correct, it would explain why the remedy lapsed into oblivion, and would furnish an important proof in our day for the often misunderstood truth, that practical results do not become the property of science or art, until they are referred to correct principles.—*Dublin Quarterly Journal, from Zeitschrift fur Rationelle Medicin.*

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The Consumption Curers of New York. By An Invalid M. D.

With regard to life it has been said by a late writer, that "we persuade ourselves that it teems with novelties and delights; that it abounds with high festival days and gala shows, somewhere in happier regions, although they come not to us." This remark is especially true with regard to the hopes and expectations of the invalid.

Art may fail him at home, measures which he must feel are well directed, may disappoint, friends may mournfully walk around him; still his mind at times overleaps all, and loves to revel in the idea that somewhere, in some unknown land, there lives the mind to conceive, and there exist the remedies which it can direct, for his recovery.

The sweet solace of the mind, Hope, as every one knows, is the constant attendant on consumption, where it is, indeed, a heavenly visitant. Wasting, day by day, who has not seen the wretched victim letting go the greater hopes of yesterday, which may have pointed him to a complete recovery, but to cling the faster and with a sweet content to those of to-day, although they promise only a partial convalescence.

I cannot conceive of a more beautiful dispensation of providence than this. Round and round in a narrowing circle, day by day, but nearer the end, yet there is always hope that the last thing tried, despite of preceding failures, will prove just what is wanting. So sweet a comfort the pitying angel must send for a good purpose. But so much good comes not unmixed with evil; for this very buoyant feeling of hope is taken advantage of by designing men, whose promises to furnish remedies to suit every case, are only equalled by the extent of the popular credulity. I believe that it is in ignorance, that such deceive the afflicted. If there are any who do it knowingly, who *will* take advantage of this heaven-born feeling for the purpose of money-making; to them I have but to say with Othello:

> Never pray more: abandon all remorse,
> * * * * * * *
> For nothing canst thou to damnation add,
> Greater than that.

Messrs. Editors:—Guided by just such feelings as I have attempted to describe, I directed my footsteps to the great city of New York. I have a large cavity in the upper part of the left lung, and I had been told with a sad voice and a firm aspect, by one whom I loved and had every reason to respect, that softening had already begun in the apex of the opposite organ; and I am emaciated to the last degree. Nevertheless,

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from the glowing accounts which I had heard of the wonderful power over the disease, possessed by numberless men in this great commercial emporium of our Union, I resolved to proceed thither at all hazards.

My mind was filled with vague, but most entrancing hopes, shadowy outlines of superhuman skill, in men, high above their fellows in point of pure humanity and disinterested devotion to the science of life, flitted before my morbid vision, giving me strength to endure the journey.

Two great parties I found engaged with equal zeal in this important work. The one I shall describe as the constitutional class, or those who adopt a general treatment; the other the local, or those who adopt a strictly topical method of cure. I had been educated in the former school, and did not tarry long with its professors.

Improve the nutrition,—cod liver oil—good diet—much out door exercise,—measures which I knew had saved me so far, were all they could tell me about; but knowing all this before, I was satisfied, and wished to go farther; for these I found were not the men who were doing so many wonders. I diverged a little into an intermediate class—a sort of divining doctor, by spiritual agency—who had an immense run, as I learned, among the clergy. The Dr. was overrun with patients—his ante-room was like the lobby of the theatre on the night of a popular actor's benefit.

I took my seat, and abiding my turn, it came at last. I found behind the scenes, one having the air of "a most prosperous gentleman," who looked through my case with an imposing flourish—smiled approvingly—received a fee,—I thought an enormous one—and bade me follow him and I would be well. Conducting me back into the ante-room, he sung out some words in an unknown tongue to a clerk near the window, who wore a remarkably stiff standing shirt collar, and then, with a graceful wave of the hand, withdrew. This latter person at once handed me a package of medicine, already neatly put up in a handsome paper box. Ah, said I in surprise, did you have it ready?—Yes, said the clerk carelessly, I saw you come in, and whilst you were waiting to see the Boss, I put it up. Then rejoined I, with warmth, you knew beforehand what he meant to give me?

The clerk with a stiff standing collar thrust his tongue into his left cheek, drew the lower lid of his right eye grimly down with his ring finger, leered at me significantly, but with much good nature, and I departed, I trust, a wiser man.

After visiting a man who had told me that he had enjoyed the honor (hitherto unknown to Americans) of being the physician for many years to her majesty, Victoria, queen of Eng-

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land, and that he had a book which he sold for 12½ cents, which would tell me how to cure myself of my disease as well as he could, and which I did not buy for reasons which must be obvious; I became disgusted with this whole class, and having no other alternative, threw myself into the arms of the Topical party, with hope still undiminished.

But in this there was some difficulty, for I found two parties, and which to select perplexed me some. The one I shall characterize as the *Probangers*, the other the *Inhalers*. From what I learned, the history of these parties is possessed of no little interest.

It appears that the Probang, and its accompanying sponge and caustic, were not originally used to cure consumption. In simple throat affections, however, it had had an immense run. Clergymen every where had tried it, and such of their flocks as they could influence had followed suit, and the whole thing became rapidly much in vogue.

Finding how easily it went down the throats of the people, it bye and bye took a bolder stand, and stoutly proclaimed its power to cure consumption, in its most common form. Still, it must be remembered, in all this time it never claimed to go beyond the bifurcation. But we all remember how popular it was, and what vast sums of money it must have made.

Whether it was the latter, which is a great stimulus to invention, or some higher motive, it is certain that this thing did not pass unnoticed. Active minds were at work, and vigorous intellects became engaged in tapping this rich mine, and in pushing farther the investigation. As the result of all this, inhalation turned up. The probangers were taken on their own ground—the people were told that if topical treatment, so partially applied was successful, how much more were they entitled to expect from a method making the whole lung accessible to medical agents. The reasoning was plausible—the thing took—Probangdom tottered to its very base, and inhalation became the rage.

But our friends were not to be put down in this manner; they were penetrating men, and at once saw that all they had to do was to go a little deeper. The old idea of the bifurcation, being the limit of the probang, was therefore abandoned; it was proclaimed that cavities could be invaded and sponged out, and that inhalation could not dare do more than it.

This was the state of things at the time of my visit, and it was this which led to my perplexity already spoken of.

But as I had already (as every body else almost has done in my situation) used the probang, as far as the bifurcation, as it was said to have been applied, I at length decided upon inhalation, and repaired without delay to its head quarters in

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the city. The Doctor received and examined my case with exceeding care. At home, my medical friends could perceive at a glance, as they told me, by the flattening of the left side of the chest, and by its quiescence during respiration, the nature of my disease; but these signs were not sufficient for my new adviser.

He stripped me to the skin, measured, percussed and auscultated, over and over again every part. I never saw so much pains, and would have thought some of his manipulations indicative of decided "greenness," but for the exalted reputation, and the obviously large experience of the operator. He found my case a very beautiful one—I was, he said, just enough diseased to test the full power of his method. In the course of his remarks, however, it turned up, that this person was not the genuine man so widely known, and I dressed myself with some show of indignation. He took my complaints very quietly and showed me into the next room. The person who there received me won my heart. He showed me around, examined my case, predicted "a good time coming" for me soon; but in the midst of it all, announced himself as only an assistant, and appeared greatly surprised that I should think any thing of that. I stamped in rage, and announced that I had come all the way from Virginia just to see the genuine article, and would not be satisfied with any substitute. This gained me admission into the great man's presence. I found him superb. My account of my reception amused him much, and we became unreserved and quite intimate.

The fact was, he told me, that these fellows had come well recommended to him,—the business had prospered in their hands—he was no judge of qualification—did'nt pretend to it—had seen an opening for it, had got the business up, and managed only the advertising and money department. In short, said he, I am only the capitalist of the concern. The little fellow you first saw, he furthermore proceeded, is, I think myself, a little too fussy over the chest; but the other one, I do think, is *nice* for the throat.

I had one other chance, which was to have my cavity sponged out. The Doctor told me my case was a beautiful one for the treatment. I admired his ingenious arguments in favor of his method, and was quite carried away by his charming description of the *rationale* of the whole operation. When he finished, I announced, with enthusiasm, that I was a convert to his views, and pronounced myself ready at the moment for the operation. He examined me again with greater care, and with a faint touch more of gravity in his countenance. It was just the thing for my case, said he, and would have to be done, but not then. You get back home, he pro-

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ceeded, and *get a little more strength*, and then return, and I'll perform the operation for you.

One hour afterwards, feeling as a doomed man, I left the great city of New York. The consumption curers have taken from me all my bright hopes, and left me but a mockery.

[*Virginia Med. and Surg Journal.*

On the Application of Protosulphate of Iron in Erysipelas. By M. Velpeau, M. D.

M. Velpeau observes, that true erysipelas is constantly confounded with other inflammations, (viz., phlebitis, diffuse phlegmon of the cellular tissue, and angioleucitis,) which differ from it in their causes, seat, progress, danger, and treatment. A prolonged consideration of the nature of the affection has led him to lay down the following propositions:

1. Erysipelas, taken in its surgical sense, has its predisposing cause much oftener in external atmospheric, or meteorological influences, than in the state of health, or general constitution of the patient. 2. The determining or occasional cause is, almost always a wound, scabs, or some irritation of the integument. 3. Its efficient cause is, matter proceeding from without, or altered tissues, which mingle primarily or secondarily with the fluids of the part affected. 4. The fluids so affected induce general and local phenomena. The first occur before the second when there is, at the beginning, a passage of the fluids into the general current of the circulation. The order of occurrence is reversed when the change only takes place through imbibition. 5. The fluids in the inflamed skin, altered by the morbific element, only seem to circulate or advance, by endosmosis—the erysipelas still, however, spreading itself along the dermis like oil upon a plain surface. 6. A large proportion of the morbific matter remains to the end under the epidermis, or in the cutaneous tissue, mingled with the blood in the inflamed part. 7. The totality of the erysipelas is almost constantly formed of several small successive erysipelases. 8. An isolated patch of erysipelas ordinarily disappears, of its own accord, in six or eight days. 9. The duration of the entire disease is very variable, according to the number of erysipelas patches that may succeed or combine with each other. 10. The remedies employed, whether external or internal, to be capable of dissipating such a disease, should especially possess the power of modifying the condition of the blood.

M. Velpeau furnishes us with the results of the different

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forms of *treatment* he has employed in above 1,000 cases, in 400 of which he has kept exact notes. In 25 patients, *compression* by bandages was resorted to, with no advantage. In 33 *flying blisters* were applied, without diminishing the mean duration of the disease; these proving advantageous only in certain cases of phlegmonous erysipelas and angioleucitis. No satisfactory result followed the employment of *nitrate of silver* in 30 cases. In 200 cases, *mercurial ointment* was resorted to, with the effect of sometimes diminishing the duration of the affection by a day or two, and rendering it a little less painful. It is, however, very repugnant to the patient, spoils the linen, and sometimes induces salivation. *Lard* employed in 23 cases, although not causing these inconveniences, was found even less efficacious. A variety of other substances have been tried by M. Velpeau, but, as he found them useless or injurious, we need not advert to them.

Calling to mind the modifications which the preparations of iron produce in the blood, it seemed to him that a disease so superficially placed, and one in which the inflamed tissues are so imbibed with altered fluids, was well calculated to be influenced by ferruginous preparations. He employed the *protosulphate of iron* in the proportion of 30 *grammes* to the *litre* of water, (1 drachm to 5 fluid ounces,) or 8 parts to 30 of lard. In forty cases in which this was tried the erysipelas yielded in from twenty-four to forty-eight hours. It is, however, remarkable, that when thus extinguished at its point of departure, it will still spread beyond this, along parts already imbibed with the iron. Whether the inflammation, in order to undergo modification, rrquires to become fully developed, and whether the remedy is merely curative without being preventive, further researches must show. More easily employed to some parts, the ointment would be preferable; but it is somewhat less efficacious than the lotion. When used it should be applied three times a day to the erysipelatous patch, and some way beyond its margin. The lotion should be applied by means of compresses, which are to be kept on with bandages, and wetted every few hours, so as to keep the skin always moistened. Thus far the remedy has never failed in cutting short the erysipelas; but it has a disadvantage in iron-moulding the linen.—[*Bulletin de Thérapeutique.—Southern Medical and Surgical Journal.*

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Neuralgia Treated by the Direct Application of Opiates. By Alexander Wood, M. D.

The local treatment of neuralgia has been of late much noticed by the journals, and we have in our third volume called attention to the introduction of a paste of morphia and creosote beneath the skin, by means of repeated punctures made with a lancet, as a practice which has been attended with good results.

Dr. Wood, of Edinburgh, in a late number of the Edinburgh Medical and Surgical Journal, proposes to introduce a narcotic solution beneath the skin over the painful points, by injection. The beautiful little syringe lately constructed for the purpose of injecting the perchloride of iron into aneurismal sacs, furnishes an easy and painless method of testing this proposition, and Dr. Wood cites many cases of neuralgia in which such injections have acted favorably.

Valleix shewed that there are certain points in the course of the nerve, where neuralgia is most apt to appear. These points are, according to Valleix :

1. The place of emergence of the nervous trunk.

2. The point where the nervous twig traverses the muscles to ramify on the integuments.

3. The point where the terminal branches of a nerve expand in the integuments.

4. The point where nervous trunks become superficial during their course.

It is evident then that these painful points always occurring when the nerve tends towards the surface, enables us to act locally upon the disease with every prospect of success. Valleix recommended the repeated application of small blisters at these points, which could afterwards be dressed with narcotic ointments.

Dr. Wood's method is to inject a solution of the muriate of morphia, or some other narcotic liquid, beneath the skin into the cellular tissue around the nerve, by an aneurismal syringe; and he contends that the local effect produced checks the intense pain, and that the remedy being absorbed, produces its constitutional influence with great rapidity and certainty, the patient being at once quieted and put to sleep. The author, therefore, arrives at the following conclusions:

1st. That narcotics injected into the neighborhood of a painful nerve affected with neuralgia, will diminish the sensibility of that nerve, and in proportion will diminish or remove pain.

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2d. That the effect of narcotics so applied are not confined to their local action, but they reach the brain through the venous circulation and there produce their remote effects.

3d. That in all probability, what is true of narcotics would be found equally true of other classes of remedies.

4th. That the small syringe affords a safe, easy and almost painless method of exhibition.

5th. That, destitute as we are of any precise experiments as to the applicability of cellular tissue, as a medium for the reception of medicinal agents, the experiments made with the syringe shew, that it seems to offer an excellent surface for the absorbent action of the venous system.

6th. That the method now detailed seems as extensively applicable as any of the methods of applying remedies through the skin heretofore used.—*Virginia Med. and Surg. Jour.*

On a Peculiar Black Discoloration of the Skin of the Face. By J. Moore Neligan, M. D., M. R. I. A., &c. (*Dublin Quarterly Journal of Medical Science, May*, 1855.)

This case closely resembles the one related by Mr. Teevan in the Medico-Chirurgical Transactions, vol. xxviii; like that one, it occurred in a young woman, whose catamenia were deranged, and affected especially the skin surrounding the eyes. The following is an abridgment of Dr. Neligan's account and the view he takes of it; Eliza D., aged twenty-one, a dress-maker, of leucophlegmatic habit, single, enjoyed good health until the disappearance of the catamenia two years ago. This was followed by an attack of Erysipelas, recurring on the right side of the body at each monthly period. This continued for a year. About seven months ago, the erysipelatous affection was treated with tartar emetic in small doses, which induced vomiting at the time, and left a chronic irritability of the stomach, giving rise to daily emesis. In August, 1854, for the first time, some blood was observed in the vomited matter. In September she threw up about half a pint of reddish brown matter; the same quantity of a similar matter was vomited every morning for four or five days. In October, at the regular period, this black vomiting again returned, and now for the first time a dark bluish-black stain was manifested at the inner canthus of the left eye. When Dr. Neligan first saw the case in December dark stains covered nearly the entire upper eyelid of the right eye, and partly that of the left; the under eyelids of both eyes were completely stained, and on the right side the dark patch reached the skin of the cheek. The color

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was precisely that of Indian ink; examined with a powerful lens, it was evident that the stain was unequal in depth, and was dotted over the surface of the skin; the dark dots corresponding to the orifices of the sebaceous glands; the skin was exquisitely tender. Dr. Neligan regards it as a case of stearrhœa nigricans, resulting not from a change of extravasation into the cellular tissue of the eyelids, but from an increased and morbid secretion of the sebaceous follicles of the region; a view which would seem to receive support from the case given by M. Bousquet at page thirty-four of the present number of the Review. The inference with regard to treatment, as Dr. Neligan observes, is that local remedies will be of no avail, and that a cure can only result from restoring the normal action of the sexual organs.—*British and For. Med. Review.*

On Chalk Metastases (*Kalk Metastasen*). By Rudolph Virchow. (*Virchow's Archiv für Pathologische Anatomie, &c. Band* viii. *Heft* 1.)

Some years ago Professor Virchow performed the post mortem of a young lady whose case had thoroughly puzzled all the leading physicians of Berlin. She had complained of pains throughout the body, but these, which were attributed to rheumatism, had resisted all the means employed for its removal. After death numerous and large nodes of cancer were found in almost all the large bones, occupying cavities of a corresponding size in the osseous tissue, and no where rising above the level of the bone. A large quantity of white sandy deposit was found in the calyces and pelvis of the kidneys, and on dividing the lungs considerable deposits of a hard greyish white substance were found, and a similar deposit occupied the mucous membrane of the stomach. The salts which had been absorbed in consequence of the cancerous deposit in the bone appeared to have found a fresh nidus in the kidneys, lungs, and stomach. Professor Virchow has recently met with four similar cases; the following is a brief abstract of the characteristic features found in cadaveric inspection. It may be premised that in all four there was evidence of a recent degenerative nephritis, in the second or third stage of the disease, in that period at which the disturbance of the secretion is greatest; a point upon which Professor Virchow lays great stress, as he attributes the chalky deposit to impeded excretion by the urine. In the first, a maid-servant, aged forty-three, the upper lobe of the left lung exhibited posteriorly a hard spot, the size of a nut, on section yellowish white, dry

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and friable, which proved to be chalky infiltration. Similar smaller spots were disseminated through the lung. The second case occurred in a girl aged fifteen, who presented a large mass of sarcoma, which had perforated the temporal bones from without inwards. The right parietal bone was occupied by similar growth; the posterior part of the inferior lobe of the right lung presented several dense, dry, hard nodes of chalky infiltration. In the third case, a young man of nineteen years, who died of necrosis of the left femur, the mucous membrane of the stomach was found infiltrated with calcerous matter. The fourth case occurred in a man, aged seventy-three, who had labored under a cancroid affection of the lip, of the clavicles, and several ribs, and died of gangrene of the lung. Here the lungs exhibited, in addition to spots of cancroid disease and gangrene, dense calcareous infiltration in a part that was very emphysematous, so that the septa of the tissue resembled hard spiculæ, and the inner surface of the pleura was invested with thick deposits. The last three cases resembled that of the young lady in Berlin in regard to the co-existence of extensive bone disease. In the first there was no apparent source from which the lime salts could be derived, but the bones were not especially examined. The chalky infiltration of the mucous membrane of the stomach, which is noted in two cases, deserves a little further attention. In both the altered parts were altered in appearance and to the touch. They appeared opaque, whitish, more or less spotted, feeling dry and resistant; in the first case observed the tissues crepitated on section. The microscope demonstrated a fine granular deposit (blackish by transmitted, white by reflected, light), external to the follicular structures, which would probably mean that a portion of the glandular tissue had been absorbed to make way for the deposit. Acids dissolved the granules, and caused an evolution of carbonic acid gas; after the application of sulphuric acid, sulphate of lime crystals formed. The co-existence of extensive disease of the bones with extensive ossification of the vessels of the medullary portion of the brain, in the case of a young man aged twenty-six, is also quoted in illustration of the view advocated by Professor Virchow.

Professor Virchow was of opinion that in these cases he had to deal with a direct cretification of the tissues, bearing, as he thinks, very materially upon the doctrine of metastases, on which account he has selected the title for his paper that we have placed at the head of this notice.—[*Ibid.*

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Treatment of Laryngitis by the Insufflation of Powdered Nitrate of Silver. By M. Ebert.

M. Ebert observes that every surgeon who has attempted the application of solutions of nitrate of silver to the larynx, must be convinced of its difficulty, if not impossibility. Indeed, he doubts whether the fluid ever reaches that organ at all; and in two cases of croup, in which the attempt was made by a most expert surgeon, he found after death that not a trace had penetrated into the larynx itself. In repeated attempts in the dead body he has constantly failed to introduce a sponge mounted upon a whalebone, and only after manœuvering could he get a silver cathether to enter. How much more difficult must it be, then, during life, when the very attempt stimulates all the neighboring muscles to resistance.

On the other hand, nitrate of silver, in powder, may be introduced by the simplest agency. We all know how easily pulverulent substances, drawn in unawares by a deep inspiration, enter the larynx, and give rise to irritating cough. Trousseau was the first to apply this fact to the treatment of laryngeal affections by nitrate of silver; and Professor Burow, of Konigsberg, speaks very highly of this mode. He mixed three grains of arg. nitr. with one drachm of saccharum lactis, and caused the patient to insufflate daily as much as would lie in the barrel of a steel pen. Chronic laryngitis, which had gone on to the production of complete aphonia, was thus cured in a few weeks. Since he saw this account, M. Ebert has used the same mixture with surprising success in several cases of laryngitis. So minutely does the sugar of milk divide the nitrate, that if even a small portion of the powder only reach the larynx, it will still contain its proportion of the nitrate. He administers it in the following way. A steel pen, charged with as much powder as it will hold, is attached to one end of the barrel of a quill, which is also open at the other end. This is introduced far enough into the mouth to bring the steel pen opposite the root of the tongue. The lips are now closed around the quill, and the nostrils compressed, while the patient is desired to draw in air rapidly and forcibly through the quill-barrel. Almost every one fails at first, but all succeed on the second or third attempt—the cough and irritation of the larynx announcing the penetration of the powder there. Even delicate females and children easily practice the insufflation, and will repeat it for days or weeks together. Young children may have it administered by an apparatus contrived by Professor Burow. M. Ebert has as yet only employed the remedy in laryngitis; and he briefly relates six cases of its successful application.—*Annalen des Charité Krankenhauses.—Ibid.*

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On Dr. Landolfi's Treatment of Cancer. By M. Lasègue.

Dr. Landolfi, surgeon-in-chief of the Sicilian army, and lecturer on cancerous diseases at the Trinity Hospital, Naples, is now visiting different parts of the continent, for the purpose of propagating his method of curing cancer. Having secured many adherents at Vienna, he has repaired to Paris, where a certain number of patients, selected from Saltpêtrière, have been placed under his care, a medical commission watching the results. As this method, though exciting much attention in Italy and Germany, is scarcely known in France, and we may add in England, M. Lasègue, while awaiting the report of the commission, proceeds to give some account of it; and although naturally prejudiced against any specific method of treating the disease, the above-board course of procedure adopted by Landolfi, and the large amount of testimony of success he adduces, have evidently made a considerable impression upon him.

The specific employed by Landolfi is the chloride of bromine, applied externally as a caustic, and administered internally, the latter being of quite secondary importance. This caustic, mixed into a thick paste with liquorice powder, may be employed alone, or it may be combined with other caustics, as in the following formula: ℞ Chlor. brom. three parts, chlor. zinc. two parts, chlor. antimon., chlor. auri. ana one part. To be mixed in the air, on account of the fumes disengaged. In open cancer, Landolfi regards the chlor. zinc. as indispensable as a hæmostatic; and the chlor. auri. seems to exert a special action in encephaloid. Cutaneous cancer, epithelioma, lupus, and small cysto-sarcomas may be treated by an ointment formed of one part of chloride of bromine to eight of basilicon. The healthy parts around the tumor are to be protected by bands of linen, one and a half to two inches broad, covered with ointment (four parts of chloroform to thirty of lard), and the patient is placed near a window, so that the fumes may escape. Smell compresses, upon which the paste has been spread, are gently applied to the part, in an imbricated manner, so as to secure exact juxtaposition, keeping two lines clear of the sound parts. The whole is then covered with charpie and diachylon. A sharp burning sensation is soon followed by severe pain, which may last for several hours, and is combatted by repeated doses of anodynes. The paste is usually kept on for twenty-four hours, and on its removal a line of demarcation is generally perceived. The tumor is in part white, and in part reddish, or marbled with yellow and blue. Bread or lettuce-leaf poultices, or basilicon ointment,

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are now applied every three hours. As the gangrene proceeds, the pain diminishes, and about the fourth or fifth day the eschar loosens, being removable by the forceps from the eighth to the fifteenth. A healthy granulating surface is then exposed, and if any vestige of the disease is observable, a little paste is reapplied to that spot. The wound is now to be treated as a simple ulcer, and if there is a deficiency of suppuration a lotion is to be applied, containing from twenty to thirty drops of the chloride of bromine in five hundred grammes of goulard water. The ulcer usually heals rapidly from the circumference, the cicatrix resembling that resulting from incised wounds.

In spite of the severe pain, there is rarely, febrile reaction, and no change in the patient's regimen is required. Although Landolfi believes the paste acts by absorption, as well as locally, he regards internal treatment as only adjuvatory, and only so employs it, in the hopes of preventing relapse. The treatment even in very bad cases, usually at least affords very notable relief, and in such as are quite hopeless or inaccessible to caustic, a lotion, containing ten to twenty drops in five hundred grammes of water, may exercise some useful modifying power.—*Archives Generales—Ibid.*

Bibliographical Memoir of Charles A. Pope, M. D.

The September number of the New Jersey Medical Reporter contains a handsomely excuted and faithful steel engraving of our esteemed fellow-citizen, whose name stands at the head of this article. The memoir and likeness forms a part of the history of the American Medical Association, recently issued by the enterprising editor of the Reporter—Dr. Pope having been honored by being elected President of the Association. Our readers will take pleasure in reading this brief but interesting memoir. EDITOR.

DR. POPE was born in Huntsville, Alabama, on March 15, 1818, consequently, being now in the 37th year of his age.

His primary education was received at Greene Academy, in his native town. He subsequently passed through the prescribed courses of collegiate study in the University of Alabama, and immediately afterwards commenced the study of law. Finding, however, that the sedentary habits necessary to its prosecution, were incompatible with his then rather delicate constitution, he abandoned it for the study of medicine.

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He began his medical studies with Drs. Fearn and Erskine, of Huntsville; the former being already widely and well known as a surgeon, and the latter ranking high as a physician. For both these gentlemen, Dr. Pope has always entertained high admiration and regard; he has always looked upon them as perfect types and exemplars in a social as well as a professional point of view. It was doubtless fortunate for the subject of this notice, that his early professional education was confided to such men. His own early eminence may be in a great degree attributable to their influence and example.

Dr. Pope attended his first course of medical lectures in the Cincinnati Medical College. Dr. Drake was then at its head, and in the height of his fame and popularity as a teacher. He was the idol of the class, and has always been regarded by Dr. Pope as one of the "greater lights" of the profession in this or any other country or age.

At the age of 21, Dr. Pope received his degree from the University of Pennsylvania, and soon after repaired to Europe for the further prosecution of his studies. It was in the city of Paris, in Nov., 1839, that the writer of this brief notice first became acquainted with the young surgeon, for he had already begun to manifest his predilection for this branch of the profession. He was then noted as the most expert and neatest operator on the cadaver, amongst us. His friends, acquaintances, and teachers, even at that early day, predicted that he would in after years rank with the renowned masters of the noble and daring art.

He remained in Paris nearly two years, and afterwards visited the great continental schools, as well as those of Great Britain and Ireland.

It was on January 1, 1842, that Dr. Pope commenced the practice of his profession in the city of St. Louis, where his studious habits, high moral worth, and gentlemanly bearing, soon brought him into public notice and favor. In 1843, he was unanimously chosen Professor of Anatomy and Physiology, these chairs being then united in the Medical Department of the St. Louis University, a position for which he was not slow in proving himself fully competent. In 1846, he again visited the Old World, and furnished, during his absence, various contributions to the *St. Louis Medical and Surgical Journal.* In 1847, he was transferred to the chair of Surgery, at which time he had acquired considerable reputation as a judicious surgeon and skilful operator. It cannot but be regarded as a fortunate circumstance for him, that he delivered three courses of lectures on anatomy, before his accession to the chair of surgery; to this fact, no doubt, is to be attributed in a great degree his rapid success as a teacher and practi-

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tioner of this his favorite branch. In 1848, he was chosen dean of the faculty, an office which he has ever since held.

As a lecturer, Dr. Pope is rapid, clear, and concise; he is fluent, but makes no effort at oratorical effect. Few men can say more, or teach more, in an hour, than he. With the history and literature of surgery he is perfectly conversant. He is familiar with all the doctrines and modes of operating extant, and well may he be, as his entire attention is, and has been for years, devoted to them. He eschews the practice of medicine, consecrating himself solely to the teaching and practice of surgery. His collection of instruments, preparations, drawings and models, illustrative of his branch, are unexcelled by any private collection in the country.

As an operator, he is calm, confident, expeditious, full of resources, and, it may be added, eminently successful. Perhaps no surgeon of his age, in the country, has performed as many operations as he. This fact is not attributable to the absence of competition, for he found, on his arrival in St Louis, three surgeons high in public estimation. Dr. Beaumont was then in his glory, and he, venerable man, was among the first to discover and rightly appreciate the talents of the future surgeon of the far West. Dr. Pope's connection with the St. Louis Hospital, as well as with the City Hospital, and the circumstance of St. Louis being a centre, attracting surgical cases from the surrounding States and Territories, will in part, perhaps, account for his extensive practice and frequent operations. As yet he has not handled his pen as much as his knife. He has not written a great deal. His contributions to surgery, however, though few, are valuable, and they have been extensively copied and frequently referred to as of standard authority.

A proper notice, however brief, of Dr. Pope's career, thus far requires a tribute to his liberality and devotedness to the medical department of the St. Louis University. To him, in a great degree, the school is indebted for its success; and, in this connection, justice demands the mention of the name of his father-in-law, Col. John O'Fallon, a man whose princely wealth has always been employed in behalf of the best interests of his city and his State—of humanity and of science. To him, the subject of this memoir, and his colleagues, are indebted for the ample halls of the St. Louis Medical College, and the public Dispensary thereunto attached.

Ten years ago, one of Dr. Pope's colleagues spoke of him in a public address, a valedictory, as follows: "Our professor of anatomy is yet a very young man, but I predict that in ten years he will rank among the first surgeons of the country." That prediction has been fulfilled, and Dr. Pope is yet a young

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man. Ten years ago, St. Louis was not what it now is; then it had only a population of 40,000 souls, now it contains 130,000. What will the city and its institutions be in ten or twenty years more? May they not fully rival those of the east and of the Old World? May not the name of the young surgeon of the west rank with the most venerable names of the profession, and may he not bequeath to the institution which he has so efficiently contributed to build up, and to the profession, a fame equal to that of a Wistar or a Physick?

[*New Jersey Medical Reporter.*

Hints from a Cupper and Leecher. By J. H. Ross.—Having spent many years in cupping and leeching, perhaps I shall be excused for giving the profession, through your journal, a few hints in relation to some points which should be observed in the practice of this branch of therapeutics.

And first, let me say, that in the use of leeches, certain errors are by no means unfrequent, namely, that in leeching adults, the error in many cases consists in too *little* depletion; whereas, in young children, it consists in too *much*. It should be remembered, that one leech for a child a year old is, in ordinary circumstances, fully equal to twenty-five for an adult. A leech bites a child as though it were a perfect luxury. All the tissues are tender. But this is not all. It is not only easy for a leech to find blood-vessels in a child, but the circulation being more rapid than in adults, the flow is consequently augmented. Neither is this all. As a general rule, we can safely bleed a strong man until he faints; but never an infant. Moreover, two small leeches are always safer for a child than one *large* one, it being easier to control the bleeding from six bites of the former than from one of the latter. As a general rule, leeches should not be applied to the *throat* of a child, especially over the trachea. It is safer to select the superior portion of the sternum, which will usually fulfil the indications. Wherever applied, a young child should never be covered up, and left for nature to arrest the hemorrhage. I trust your readers will pardon me for calling their attention, as some of them will recollect, for the second time, to the importance of a cataplasm before leeching. It is common to foment the part after the leeches come off; but if it cannot be done but once, it had better be done in advance, and I will give a few reasons for such a conclusion. In the first place, it makes the part very acceptable to the leech, as it almost never refuses to fasten at once upon the skin thus prepared, and the time thus saved may be of great importance to the patient. It also saves

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much fatigue and anxiety, and enables the leecher to serve much sooner some other sufferer who counts the moments of delay as hours. But this is not all. It answers the end for which the poultice is intended (namely, depletion,) more perfectly when applied before leeching than subsequently. It is not an easy matter to soften and relax the dermoid tissue so as to promote the flow of blood to the best advantage in a moment. It takes time. If the poultice be delayed until after the leeches fill, it cannot be applied until the last one comes off; and it often happens that before this occurs, some of the bites have nearly closed, so that the benefit of the cataplasm, to a great extent, is lost. When, however, the poultice precedes the leeching, the moment that one lets go the bite bleeds at once, whether anything is applied or not. To be efficient, the poultice should be large and hot; and if a little mustard be added, so much the better. In a large majority of cases, leeches are preferable to cups for the abdomen, perineum, neck, face, and extremities. For the thoracic, dorsal, and temporal regions, and especially for pulmonary, renal, spinal, and ophthalmic affections, cupping is often far more efficient than leeching. Moreover, the quantity of blood taken in leeching is always uncertain, there being in one case much more, and in another case much less depletion than is intended. It is impossible to tell before the leech is applied how much blood will flow, there being so many modifying circumstances; some of which, perhaps, I may mention, though most physicians may be familiar with them.

Much depends upon the size of the leech; and hence many physicians, to take advantage of this fact, order large ones. But this is decidedly wrong; for in purchasing leeches, we have to take them as they run, both large and small; and, therefore, if we select the large ones for those who first call, we cannot supply those who call subsequently with even an average size, and it is not treating them fairly; and though we give them the largest that we have, the doctor is deceived, and perhaps the patient suffers. Not only so, but sometimes we are compelled to purchase a lot (because we can do no better) which has not a *large* leech among them. The proper course seems to be to have the medium size the criterion, and to modify the number as a deviation from this standard may demand.

Again, the *condition*, and also the *position* of the part, modifies the bleeding. If the part be inflamed or vascular, the discharge may be profuse. If it be hard, swollen, œdematous, cold, or exsanguineous, little blood may be obtained. The force and the frequency of the *pulse* should be taken into consideration. The position of the part will also, as I said, modify the bleeding. For example, a leech-bite upon the hand,

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which bleeds profusely while it hangs down, will stop at once on raising the hand above the head. There are other modifying circumstances which I need not stop to name. The average quantity of blood that a leech draws is about two drachms, which, with the subsequent bleeding, amounts to about three-quarters of an ounce. To arrest the bleeding, I have always found a simple compress sufficient, though various styptics are used.

Although I intended to say something further on the subject of cupping, yet, as I have already occupied more space in your valuable journal than I have any right to claim, I must omit it, at least for the present. In regard to sustaining those who make a specialty of this branch of therapeutics, perhaps I may be permitted to say a word. It is generally admitted that there should be, in all large cities, competent persons to attend to these applications, and in cases which require very nice and careful management, physicians are generally very glad to avail themselves of the services of some skilful hand. But it should be remembered that these cases will by no means sustain him. His principal support must be derived from the common every day cases; and if physicians adopt the practice, as is often the case, of sending to the nearest apothecary for the leeches, or a leecher, saying anybody can put them on, he cannot be sustained. The truth is, apothecaries, by each one doing a little, do just enough to spoil the business, with little or no profit to themselves. Moreover, if the patient, or any inexperienced person applies them, he seldom does it to the best advantage; frequently cannot make them bite, almost always produces much fatigue, generally loses time, and gains nothing in the end.—*N. Y. Med. Times.—New Jersey Medical and Surgical Reporter.*

Epidemics. By S. H. Dickson, M. D., *Professor of the Theory and Practice of Medicine in the Medical College of the State of South Carolina.*

To discover the laws of propagation and progress in the several forms of disease, would certainly advance the great interests of hygiene. Such knowledge could not fail to suggest relevant efforts at arrest, impediment and correction or counteraction. It is to be feared, however, that our profession bends too exclusive an attention to the inquiry after causes and modes of action rather than the ascertainment of laws—the true function of scientific investigation, at least in its elementary steps.

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Chemistry goes rapidly forward. She concerns herself little with the *why;* she seeks to know the facts, and their uniform occurrence which denotes the law. Astronomy has reached her present sublime position by the same method. She contents herself with the expression of laws by established formulæ, and reasons, in accordance with them, onward from things known to things unknown.

We speak of diseases familiarly as sporadic and epidemic, and sometimes insist on a distinction which has, so far as I know, never been clearly defined. A board of health announces in a certain city the existence of a given pestilence, and while admitting the unwelcome truth, consoles all those concerned with the information that there are only a few sporadic cases—it is by no means epidemic. Shortly after another report declares reluctantly that the number of cases has increased and is increasing, and that the disease is now epidemic. Where is the line to be drawn? What proportion of any population may be affected without the change having occurred from sporadic to epidemic?

The word is not used in its merely etymological meaning on the majority of occasions. It has come to be misemployed among physicians almost universally, to point out or refer to some obscure mode or modes of causation. Not content with observing and collating the phenomena, they would indicate, however vaguely, the agency by which these are supposed to be brought about. The superstitious, both ancient and modern, ascribe all to direct interposition of a higher power; the arrows of an incensed Apollo; the wrath of an angry God. Sydenham talks of "telluric emanations;" Prout of a ponderable matter in the atmosphere; Holland hints at animalcular invasion; Mitchell and Cowdell at fungous dispersion. This is all very well; men that think must theorize, and every hypothesis has its uses. Even the wildest conjecture is better than a stagnation that must be infertile. Each of these explanations may apply fairly enough to one or two cases; but it would be easy to show their total insufficiency to account for even a moiety of the observed and recorded facts.

The great evil which needs present correction in our medical reasoning is its premature exclusivism. The truth when arrived at in any supposable case must indeed prove absolutely exclusive, and thrust aside all error; but it is arrogant to assume that we have already attained such absolute truth. In the progress of inquiry we meet with facts that we cannot reconcile. Shall we refuse to recognize any of them for that reason? Surely not. Some diseases known to us only as derivative, and others generally derived and linked together in a regular succession, arise sometimes insulatedly, as if of casual or spontaneous occurrence. If all the apparent facts are real,

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they will in time be reconciled, and we must not now place in factitious opposition, or deny one because we receive the other. The ordinary course of disease becomes familiar to us. Malarious fevers show themselves in certain well-known localities, and at certain seasons. In dense populations we expect the results of crowd-poisoning. A contagious affection being introduced anywhere will attack those in its neighborhood. The rate of usual progress is also familiar, and observation has enabled us to fix upon an average proportion of attacks and of mortality. But it is well known that there occur remarkable and most impressive exceptions to all these familiar rules, and when any one of our long catalogue of diseases transcends the usual bounds, and assails great numbers or spreads with inordinate rapidity or to an unaccustomed extent, we call it epidemic. But with the use of the term comes almost always the false association. The customarily assigned cause is set aside; an unknown and mysterious agency, telluric, cryptogamic, animalcular, atmospheric, is brought in to account for the novel phenomena. It is this course upon which I am venturing to comment, while I protest against the errors into which it has led us. I am willing to admit the general ignorance of causative agencies in our pathology, if that point be insisted on. What I contend for is that we should not introduce a new and altogether avoidable source of confusion into inquiries already too difficult and obscure.

To be epidemic implies nothing more than this: that the cause, whatever it may be, of the pestilence, is specially, sometimes almost miraculously, active and efficient. The change is only in degree; not in nature. The sporadic and the epidemic are identical; and not as is often assumed, in contrast and opposition, incompatible. Every disease may become epidemic in the sense of mere multiplication of numbers; not only catarrhal and typhous fevers, dysentery and cholera, but small-pox, and whooping-cough, and jaundice, sun-stroke and furuncle, mesmerism, convulsions and spiritualism: contagious and non-contagious maladies, zymotic and nervous diseases of the fluids and of the solids, morbid alterations of the tissues and morbid activity of the functions. To apply the term epidemic to all these promiscuously, however as expressive of mysterious causative agency, would be irrational. Each has its own law, which we would do well to ascertain and hold to. A contagious epidemic has spread by contagion; a typhous epidemic by ochlesis and its influences, whatever they may be; a malarious epidemic by miasmatic agency; nervous epidemics by sympathy and imitative and other mental functions morbidly excited. There is no general cause which

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supersedes the other special causes; a point not seldom taken for granted.

"I do not think it contagious," says a writer on dengue, "I do not think it contagious, *because* its invasion was so sudden and general all over the city that any attempt to trace it from patient to patient, from house to house, or from quarter to quarter, would utterly fail." In the April number, 1855, of the N. W. Med. and Surg. Journal, there is a report from Prof. N. S. Davis, a most competent observer and able reasoner, upon the recent outbreak of small-pox as epidemic, in Chicago. He said: "The disease had been developed with a rapidity and to an extent not easily explained on the supposition of contagion or simple communicability from one to another. Thus, previous to the 1st January, there had been so few cases in the city that the subject had attracted no attention, only one case having come under the observation of the reporter. Between the 6th and 10th of that month, it had sprung up as if by magic in almost every section of the city and to some extent among all classes of the people." Further on he said: "Of the twenty cases alluded to as occurring under his own care, *only one* could be traced to any known exposure, or contact with other cases. They were widely separated from each other, in different sections of the city, and among different classes of people." Prof. Davis then comes to the conclusion, that "it is clearly apparent that the city had been visited by a *distinct* variolous *epidemic* influence." Now, it cannot surely be necessary to maintain the contagiousness of small-pox; but if the argument above quoted against the contagiousness of dengue be a sound one, it ought logically to apply here also.

The same argument is pressed in another shape equally illogical. Certain diseases can be spread only by personal communication, contact; whence the word contagion. But it has long since lost this strict etymological meaning and like a great mass of other words is used figuratively. Absolute contact is not required for the communication of many known contagious diseases—small-pox, measles, scarlet fever, whooping-cough, &c., which spread themselves a certain distance around their foci; how far no one has determined. When we commence the inquiry, however, as to the contagiousness of any newly discussed malady, strange to say, the old meaning of the word is brought back upon us and we are required to prove contact, or personal communication, or at any rate near approach—a thing admitted to be unnecessary—a demand, compliance with which is known to be impossible, with regard to any febrile contagion; Haygarth long since told us impossible as to small-pox—an assertion repeated by Prof. Davis and many others. Even Prof. Hume seems to acknowledge and

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feel the difficulty, and makes what seems to us a needless effort to bring his cases of yellow fever within a certain number of feet or yards of each other, or of certain common centres.

We literally know nothing of the contingencies which affect or modify the extension of any disease—contagious or non-contagious. They vary relatively to the cause itself, whatever that may be; to the surrounding circumstances, of course varying infinitely; and to the constitutions of the subjects affected. As to the cause—let us reflect upon the strongly marked difference of energy shown by oxygen in its several allotropic states—passive as in common air, ultra-active in ozone. Telegraphic electricity cannot get over an interval of one-sixteenth of an inch; the electricity of the steam-brush makes an easy leap of sixteen feet, more than three thousand times as far; and we have not yet, I think, measured the reach of the "red artillery of heaven"—the same identical flash of electricity.

These analogies illustrate our views. It is not pretended that even with their aid we can explain any of the laws we are in search of; at present it suffices to apprehend, acknowledge, and establish them.

There is another point with regard to the character of epidemics which is liable to error and misconception, and therefore deserves our careful study. I allude to their geographical relations. The geographical distribution of animals has received much illustration from the distinguished Prof. Agassiz; the geographical distribution of plants is a familiar topic. I used to enjoy very gratifying opportunities of accompanying on botanical excursions the most amiable and highly-gifted among our Carolinian savants. It was very common, upon offering him for inquiry an unrecognized plant found by the way-side, to hear the remark: "Ah! I see: exotic." Our pathologists never make such an observation. No matter what disease they encounter, cholera, yellow fever, dengue. *Exotic?* No! Indigenous, always *indigenous!*

Logicians require a discrimination between the causa *causans*, the formative or generating cause, and the causa *sine qua non*, the condition without which the first would be inoperative, but which has in itself no productive or generative power. It is the great defect of our professional writings that this latter is so frequently made to play the part of both. Want of drainage and other telluric circumstances observed and imagined; heat, electricity, moisture and other atmospherical contingencies known and conjectured; these in their varied combinations are alleged to account for every thing; to give rise to every species of pestilence. We breed all monsters; we need import none.

In the last London Quarterly Review we have the notice of

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a work by a professed forester, who in his list of trees native of England includes the sycamore, or great maple. The reviewer sets him right, proving its foreign origin and fixing by abundant authority the time of its introduction into the island. We have among us several trees brought from a distance which, finding soil and climate congenial, flourish and abound. The "pride of India, melia azedarach;" the paper mulberry; the tallow tree; nay, I know not how many others; the rose; the peach and the nectarine; the crape tree; the camellia; some with a little care, some with none at all, seem fixtures. Our woods are fragrant with the sweet yellow jessamine, the gelseminum sempervirens, which serves my purpose well in illustration of a doubtful example: for Prof. Porcher, in his late address before the Historical Society, gives some very good reasons for supposing this—in contradiction to the present universal belief—to be an exotic. Now, thank heaven, it could not by any possibility be exterminated in its wide extension over our fields and forests. Wheat and the dandelion, the cat and the rat, are they not also imported? Do not weeds and vermin follow us every where in our migrations, as well as our cereals, our fruits and our flowers? Every thing, like "the star of empire—westward takes its way." The negro and the yellow fever came both from Africa; to both the climate is congenial; both are likely to remain long here. I wonder whether the time will come when both will be pronounced alike indigenous. History gives the date of their first entrance here. The present generation ignores or contradicts history as to the pestilence, and affirms that as it now grows from our soil, it always did so. As well might the same assertion be made concerning the weeds and vermin which we brought across the sea with us. All the early writers ascribe the yellow fever of this city to importation—infection. This is Lining's view. Old Chalmers, treating of "the diseases of South Carolina," does not include it upon the list. He merely mentions it as resembling what he calls "putrid bilious fever." What an absurdity would be at the present day a treatise on the diseases of Charleston, with the yellow fever omitted! But unfortunately it has become a permanent denizen of the Southern portion of the North American continent. It is fully naturalized; and there are serious reasons for the fear that we may never be able to get rid of it.

The same thing is probably true of dengue or break-bone. Wherever it came from, there are many of us who remember well its first invasion. Yet it also seems naturalized, and has become, like the great maple in England, so familiar that many regard it as "native and to the manor born;" and the direct result of those everlasting and everpresent telluric and

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atmospheric combinations that generate every thing in the shape of pestilence.

Cholera is the name of a well-known malady, almost universally admitted to be of Eastern origin. Before 1832, we may affirm it to have been unknown upon this continent. Now-a-days we are liable to it, if, as in Buffalo, we dig ditches along our streets; or, if, as in New Orleans, we drink the bad water found in the locality. But why does this digging and drinking give rise now to such effects as did not formerly follow from them? Are soil and water changed? Cholera invaded us, as I have said, in 1832. It overran the country and disappeared in 1837. Eleven years after it reappeared, simultaneously, in New Orleans and on Staten Island, a thousand miles apart—coincidently with the arrival of two vessels from Europe, on board of which were subjects ill of it. Since that time it has never left us, and most probably will adhere tenaciously to a soil and climate which it finds but too congenial.

Small-pox often springs up among us and spreads unaccountably. So do measles and scarlatina. Perhaps no one will be hardy enough to deny that these are Eastern exotics. Whooping-cough and mumps we also suppose to have been imported; but we know not whence, or when, or by whom. It is not too much to say that all these are so fixed upon us, either by an unbroken chain of unavoidable, though invisible, transmission, or by preservation in various fomites, that we cannot hope to throw them off, and may regard ourselves as unhappily independent now of any foreign source of their production.

But let us imagine the fortunate possibility of exterminating any one of them upon this continent. How anxiously would we set about to avoid its resuscitation! If we knew from what quarter of the world it would probably invade us, how assiduously we would guard against its introduction! If we knew the contingencies that might favor its invasion and foster its spread, how earnestly we would set ourselves to correct or counteract them! In some cases we think we know these contingencies, and we establish sanitary regulations accordingly. Boards of health are every where appointed; every where seek for nuisances, and find them abundantly every where. The earth and air of a city must always be polluted; cleanliness of surface and purity of waters where many animals live together are simply impossible—unattainable. More's Utopia will be set up long before the speculations of our hygienists can be realized. There is no town in the world, of five thousand inhabitants, in which there is not filth enough at this moment to account for the presence of yellow fever, or cholera, or any other of the epidemics so unhesitatingly ascribed to neglect or contravention of sanitary considerations. Not

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to speak of the elemental difficulties, entirely out of our control, and so often pressing upon us and deranging the hygienic internal condition of any locality—such as rains, fogs, heat, calms, storms and the like—what is to be done with the daily deposits of excrementitious matter polluting the atmosphere, washed down with rains, diffusing itself through the soil, engendering animalculi and fungi, and poisoning the wells? Where is the sewer that keeps itself clean? The city of Philadelphia is proverbially neat—well swept and well watered. But when it becomes necessary to prove that she is dirty enough to generate yellow fever for herself, and needs not to be beholden to the Mandarin or any other foreign vessel for it, we have a very nauseous picture offered us of the condition of the drains and docks at that particular part of the Delaware near which this *innocent* but *suspected* ship was lying.

Staten Island presents a beautiful aspect to the visitor. On landing near the quarantine ground he is charmed with the appearance of the villages and surrounding country, from the slopes of whose granite hills all impurities are swiftly carried down into the rapid tides of the Narrows, and find their way quickly into the vast neighboring ocean. Here, too, we are deceived, and this locality, so favorable to the hygienist, is found often to entertain—shall we say *generate!*—yellow fever and cholera. It scarcely adds to our surprise when we remember that the foul and festering metropolis, until this very year regarded as the most filthy on our side of the Atlantic, often escapes these evils, when the neighboring island suffers from their presence.

Savannah, too, built upon a high bluff, with a rapid river below for drainage—and a sandy soil whence all waters may filter away—generated, as we are told, within her very bosom, in 1854, the dreadful unknown cause of yellow fever, which was let loose into the air by excavations. There are few cities, if any, of the same population, to be found in the world, whose surface and soil present so little apparently to be dreaded, as our enterprising, well governed and prettily situated sister city of the Southern Empire State.

While, therefore, we pay all practicable attention to hygiene, let us not deceive ourselves into the vain belief of the possible attainment of a degree of purity in any city or large town, that shall be absolutely protective or efficient to repel an epidemic pestilence. Gregory incidentally mentions that "the attendant of the nursery of young pheasants at the Vache in Buckinghamshire informed him that the great secret of securing the health of the young brood is to change their sleeping ground *daily*. If the locality of the encamping aviary—there were five hundred young birds—was not thus changed, a dip-

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ease speedily developed itself, which was extensively fatal." Now, let the exclusive hygienist—it is against all *exclusivism* that I am reasoning—let him reflect upon the impossibility of freshening the air of sleeping rooms night after night in a crowded city; in its streets, lanes, alleys, courts, hovels, closets: let him think of the exhalations (dwelt on by Dr. Wells) adhering to the mattresses of straw or hair or wool or moss; the feather beds and pillows, the blankets and (even more foul) the cotton "comforts" and other bed clothing, and the woollen and cotton body clothing of the poor, "the great unwashed." Can there be any hope—is there any possibility of purification? "The poor you have always with you;" the unhappy and insalubrious condition of their existence is equally permanent and uniform.

Is it not surprising that pestilence is not equally permanent among them? Are we not driven to infer that here, where the causa *sine qua non* is ever present, their frequent escape from disease is owing to the absence of the causa *causans*, and that our duty is two-fold and not simple? Must we not aim as well to prevent the introduction of the latter, as to diminish the intensity and influence of the former. In the great manufactories of gun-powder, explosions every now and then take place, in spite of the incessant and anxious care to prevent them. How absurd it would be if these failures of precaution should induce a reckless indifference, and if the prohibition of iron-heeled shoes, flint and steel, and of pipes and segars should be taken off.

Sanitary regulations are universally acceptable; they recommend themselves to every reasonable man, as tending—certainly, though imperfectly—to promote our well-being and comfort. We have become reconciled to their inefficiency, and from habit continue to exercise a blind and consoling faith in them.

But against the second mode of protection—quarantines, namely—there exists an universal and indeed a very plausible prejudice. They also have proved inefficient. They are unfamiliar, and nobody gets used to them. They are exceedingly inconvenient; they are actually oppressive and injurious. Even on the most limited scale, and when their application is indubitably proper and necessary, we submit to them most reluctantly, as an intolerable grievance, as when scarlatina breaks out in a family or a boarding school, or small-pox in a town; every imaginable evasion of them is attempted, and every means of concealment practised. Every body repels and abjures them; they are hated and resisted. Lord Morpeth, Earl of Carlyle, is, in his recent work, loud and frequent in his denunciations of them. But this most philanthro-

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pic nobleman, in his own person conveyed small-pox into Malta. Had he been *cruelly* kept on board his vessel at quarantine there for four or five days, as he was, very tyrannically, elsewhere, he would have escaped the misfortune—a painful one to most men—of having introduced into a healthy community and the house of a friend, that most loathsome pestilence.

I am by no means so sanguine as to imagine that the time will ever come when any community shall be subject to its own endemics and local epidemics exclusively. We must take the evil with the good. Iceland may, by her insulation, escape small-pox thirty years, and remain more than sixty, without measles. But a mercantile community must suffer the ills as well as enjoy the benefits of commerce.

The medical journals of the present month (July), published in New Orleans, inform us, that cholera and yellow fever both exist in that devoted city. The opponents of quarantine find in this sad state of things an argument against its oppressive and, as they maintain, useless restrictions; and those who believe in the spontaneous origin of both these forms of pestilence are strengthened in their opinions. But surely in a matter of such serious importance we are called upon to institute a deliberate inquiry into the true import of the undeniable facts. Nothing should be taken for granted without due and impartial consideration.

D. Fenner ascribes yellow fever to a peculiar intensity of malaria, and affirms that "it never bursts out suddenly" in that city, but that "the endemic fevers, bilious remittent and intermittent, gradually run into the yellow fever type, assuming its features."

In the same number of the same periodical from which I have quoted the above phrases—[N. O. Med. News and Hosp. Gaz.]—there is an able paper by Prof. Harrison, commencing with the assertion, unequivocally true as I believe, "that the special cause of yellow fever is utterly unknown;" and proving beyond all reasonable question, that "it cannot be attributed to marsh malaria." In a pamphlet which I have just received from Dr. McFarlane, this point is farther labored, and he seems indeed, to have made it clear enough, that neither mud, moisture, nor malaria, have anything to do with the production of the disease; nay, Dr. McF. claims to have "proved to demonstation that wherever filth, heat, moisture, decomposition, exhalation and malaria are combined in sufficient concentration to produce disease, there yellow fever cannot exist."

In the same journal, Dr. Barton reiterates his doctrine of the sufficiency of known and obvious contingencies to produce both the forms of pestilence mentioned.

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A certain temperature, moisture and radiation, with disturbance of the original soil, give rise to one;—"a great variation of these three elements, but more especially variation of the drying power," generates the other.

These differences do not seem very great, but the results are widely apart. A little nitrogen, carbon and hydrogen, united in certain proportions, give *hydrophobic*—in certain other proportions, *variolous* poison. Must we take for granted that the diversities of effect are owing merely to diversity of proportion of these *known substances*—or are we not rather led to the conclusion as inevitable, that there is something new and peculiar superadded in each instance, to which we are to attribute the peculiar qualities?

The contingencies required exist in a hundred places, and have existed hundreds of times in New Orleans, as in the seven years, from 1825 inclusive, without the co-existence of yellow fever. Until 1832, they never produced cholera; they were inefficient to produce it again between 1837 and 1848. We cannot help inferring that there is some causative agent present in New Orleans at this time, specifically capable of bringing on cholera; and as the effect is different, another specific cause competent to produce yellow fever. Whence are these agents derived? Analogy may assist us to answer. Dr. McFarlane informs us of "the appearance of small-pox in the interior town of Thibodeauxville." This disease, as also scarlatina and measles, often arise among us obscurely, or as it were *spontaneously*. Does any one believe them to be indigenous or of native origin? The horse, the rat, several imported grasses and weeds, are met with all around us, we are content to trace them from a foreign ancestry. But we are resolute to claim all diseases met with among us as autochthonous, except the two or three above mentioned. The foreign origin and importation of cholera need not now be discussed. Its material cause is fully naturalized and ready to act all along the valley of the Mississippi. It is doubtful whether it will ever die out from these seats. The contingencies enumerated as causative of yellow fever by Drs. Fenner and Burton, exist annually in an hundred places on the earth's surface where yellow fever is unknown. We may ask them also if yellow fever did not exist during the last two summers in an hundred places, not at all, or not obviously liable to the influence of these contingencies. I, myself, saw cases of it in localities remarkable for the salubrity of their sparse population; comparatively high and dry, and remote from all explanatory conditions, but the new one of railroad intercourse with an infected city. Was it not reasonable to attribute the new fact of their presence to the new, and only new contingency cogni-

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zable? That the cause of yellow fever has been for several years in permanent existence in New Orleans, is perfectly clear. That the supply of it is now adequate to produce the disease, even thus early, is unhappily evident. But this admission does not touch the question of its *origin*—its *foreign derivation*. Quarantine cannot prevent in New Orleans the prevalence of the disease, while its domestic supply (*preserved from last year doubtless*) exists. But yellow fever died out, it seems, in 1824; it may become extinct again, and if it should, then these restrictions may avail. Meanwhile, those other localities which have occasionally suffered, as seems proved, from the importation of a malady which they could not generate, may without censure resort to all means which promise even a temporary or partial immunity from so great an evil.

[*Charleston Med. Journal.*

Volatile Anæsthetics as a Topical Application to Recent Burns.

By R. J. Nunn, *of Savannah, Ga.*

The use of the volatile anæsthetics as a topical application to recent burns is productive of most soothing and beneficial results; not only affording almost instantaneous relief to the distressing pain which accompanies the injury, but also favorably modifying its subsequent course, and in a great degree facilitating its cure.

The method of application is exceedingly simple, it being only necessary to keep the part continually moistened with the fluid by pouring it "guttatim" from a bottle, while at the same time the injured tissues should be constantly subjected to the action of a stream of air, which may be easily effected by blowing with the mouth, by a pair of bellows, by fanning, or by the use of any apparatus that may be convenient. This method of treatment should be persevered in until the use of the remedy being discontinued, no pain is experienced.

I have not adopted, nor do I think this course would be applicable either to burns of extensive superficial area, or to those of the fourth, fifth and sixth degrees of Dupuytren; this point, however, can be determined by experiment only, but in those having a comparatively small extent of surface, and of the first, second, and in a majority of burns of the third degree its use is highly commendable.

In cases which would usually be attended with vesication, should the use of the remedy be commenced before the vesicles appear and be steadily continued until all pain ceases, the vesicles will not be produced, and after a short time the only

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symptoms observable will be a slight hardening of the cuticle, unaccompanied with any pain; in a few days this dried skin drops off and a similar but more delicate structure takes its place, as would be the case where the injury allowed to run its usual course.

Ether will be found to be preferable to chloroform, its irritating effects being much less when applied in this way; at least, such has been my experience; but where ether is not at hand I would advise the use of chloroform, rather than lotions, until ether can be obtained.— *Ibid.*

On Chlorosis Simulating Phthisis. By Dr. Rilliet. (Archives Généralés de Méd., Fév. 1855.)—Among the various forms of chlorosis is one little known, remarks M. Rilliet, which is accompanied by fever and grave functional derangement; it bears, in fact, a very close resemblance to phthisis. Thus, a young lady consulted M. Rilliet, with a diagnosis from her ordinary attendant that her lungs were profoundly diseased. The affection had commenced with dyspepsia, gastralgia, gradual diminution, and, at last, cessation of the catamenia, dyspnœa, pallor, and great prostration; then cough, with expectoration formed of saliva and greyish fœtid scuta; then hæmoptysis came on, and speedily profuse sweats, rapid wasting, and the other more obvious symptoms of consumption. The physician in attendance declared that there were unequivocal signs of tubercles at the apex of the right lung. After learning these particulars, M. Rilliet thought it scarcely necessary to examine the chest in order to confirm the diagnosis. He did so, however, and, to his astonishment, was not able in any way to find the slightest physical evidence of tubercular deposition. He satisfied himself, in fact, that the physical signs must have existed only in the imagination of the medical attendant, who, too much impressed by the general state, had believed he heard that which would explain it. Unable to find anything in the lungs to account for this state, M. Rilliet examined the abdomen; here he found a tumor, over which he heard a placental murmur—in fact, the young lady was pregnant. This did not account for all the symptoms, however, but, on inquiry, he found the patient had been very chlorotic, and was evidently so, even at the time, to a considerable extent. He concluded, then, that the pregnant state, and the moral condition it necessitated, had combined with the general chlorotic condition to produce symptoms simulating strongly those of phthisis. The result of the case completely confirmed the diagnosis.

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In this instance, pregnancy complicated the case, but M. Rilliet goes on to refer to other simply chlorotic cases, with the same apparent symptoms of phthisis. When the case is recognized, it is necessary to disregard the cough, the night-sweats, &c., and to refer only to the cause, and for this cause iron is the remedy. A great objection exists in the minds of many physicians—Trousseau among the number—to the use of iron in tuberculosis. "Iron," says Trousseau, "augments, to a frightful extent, the accidents depending on tuberculous cachexia." Yet iron (with of course, moderate exercise, and plenty of good air and food) is the only remedy for the simulated phthisis of chlorosis. Hence the necessity of an accurate diagnosis.—*Charleston Journal, from B. and F. Med. Ch. Rev.*

On Sterility depending on Certain Diseased states of the Lining Membrane of the Womb: its Treatment and Cure. By Wm. Cumming, M. D., F. R. C. P., *Edinburgh—Vice-President of the Edinburgh Obstetrical Society.*

Cases of essential and incurable sterility depending on the female are extremely rare: and it is not my purpose to refer to the cause of this form. But cases of removable sterility are very numerous; and it may be interesting to detail some of the causes of it, the treatment, and the results.

I. One of these causes is a diseased state of a portion of the lining membrane of the uterus in cases of mal-position, the diseased part corresponding with the angle formed by the flexion of the womb on itself. According to my observation, the displacement of the womb most frequently accompanying this morbid condition of the mucous membrane, is anteversion; but other forms of displacement are not exempt from disease. I am now disposed to believe that no *mere* displacement or contortion of the uterus will prevent impregnation, and that it is only when this is accompanied by a congested or ulcerated or otherwise diseased state of the lining membrane that it is a cause of sterility; and the reason of this seems to me to be, that the morbid part so flexed acts as a valve, which, while it allows a passage, painful or painless as may be, to the menstrual and muco-purulent discharges from within, refuses entrance to any fluid, such as the seminal, from without.

When these cases first came under my notice many years ago, being at that time inclined to attach more importance to mere displacement of the uterus than I now do, I attempted their cure by the means that were in use for the removal of the displacement. The chief means employed was the use of

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the intra-uterine pessary, on the supposition that there was no disease of the womb; but the success of this by no means corresponded to my expectations. It was evident that there was more than mere displacement, and that recourse must be had to other means; and having discovered in some (not certainly in all) a preternatural degree of tenderness and induration at the point of flexion, I was led to the conclusion that the mischief lay there, and that the treatment should be directed to that part. Accordingly, instead of inserting the pessary, I introduced bougies of different sizes till the constriction that existed at the angle of the displaced womb was removed, and followed this up by applying the solid nitrate of silver to the congested or otherwise diseased surface. The result of this was good. The painful menstruation was often removed, always relieved, a more free menstrual discharge followed, the intra-uterine leucorrhœa was by successive applications cured, and the patient in due time became pregnant. To this, of course, was added such treatment of the general system to be required.

Of this class, the following may be regarded as a not uncommon specimen:—

Mrs. Z——, married three years, had before marriage been more or less out of health at the menstrual period; but after that event, had had her uterine symptoms much aggravated. She had for the two years previous to consulting me been treated by leeching, counter-irritation, &c., but without effect. She had also, on one occasion, had a bougie introduced within the os uteri, but the pain caused was so exquisite that the lady fainted, and the operation was not repeated. When she came under my care, I ascertained that there was very decided anteversion, great tenderness at the curve of the uterus—*i. e.*, at the part where it was anteverted on itself; and when I introduced a very small bougie for the purpose of examining the os internum, there was great tenderness and clearly some constriction. The leucorrhœal discharge was not very considerable, but it was *intra-uterine*, and irritated, and almost excoriated the vagina; and it was largest in quantity about midway between the menstrual periods.

It appeared to me that both the lady's illness and consequent sterility depended on the narrowness of the os internum, and probably also on a diseased state of the mucous membrane near it. There was no congestion either of the cervix or body of the womb, nor could I detect any other functional or organic derangement.

Having explained to the patient the nature of her case, and assured her that I could not undertake the treatment unless I was allowed to treat her by dilatation, to which from her pre-

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vious experience of the bougie, she had great objection, and having reduced considerably the tenderness of the diseased part by the inunction with belladonna ointment before introducing the bougie, I succeeded in dilating the os internum, and ultimately in applying the solid nitrate of silver. The effect of this was soon perceptible. She had much less painful menstruation, more of the discharge, and of a more natural character, and the examination of the affected part by the finger was much less painful. This was repeated from time to time for three months, when she left Edinburgh for her own home. About a year after, she returned, complaining that she was not yet cured, and proposed a consultation with another practitioner, who, after a careful digital examination, recommended incision of the os. To this she would not consent, and perhaps fortunately, for she was then nearly a month pregnant, and in due time was delivered of a very fine child, since which her health has been good, and her local symptoms have disappeared. I may add, that the last time she was in Edinb —I mean the time when she was a month pregnant,—the teversion was as considerable as it had ever been; and ex that she voided urine more frequently than natural, I am aware that she suffered in any degree from the displacement.

This is a fair sample of a large number of cases, in which the treatment is neither severe nor protracted, and the result is very successful. The probability is, that the displacement and diseased condition of the mucous membrane existed long before marriage, but have been aggravated by it. In such cases, so far as my experience goes, dilatation by bougies, and the application of the solid nitrate, effect a cure, and are not liable to produce any dangerous or severe symptoms. In this respect the latter is much preferable to an injection of the solution—not a few disastrous results having followed the escape of the injection into the peritoneal cavity.

II. Another class of cases occurs similar to that now reported, but without displacement of the womb. (By this term I mean flexion of the womb on itself, of so decided a character, that, turn or twist it how you may with the uterine bougie, it always reverts to the same mal-position, which is certainly not the case with many of what are called dislocations of the womb.)

The essential nature of this class appears to me to consist in marked constriction of the os internum, with ulceration of the lining membrane above the constriction, and this ulcer often accompanied with induration of its base, and of part of the neighboring tissue. Whether the constriction precedes the ulceration or the reverse, I do not pretend to say; but I have no doubt that the ulcer increases the constriction, and that the removal of the former is essential to the cure. For this purpose

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I invariably dilate the os externum and internum and the cavity of the cervix, and apply the solid nitrate of silver very freely to the ulcerated or diseased surface, and with the best results; by which I mean removal of the local and general symptoms complained of by the patient, and, in time, of the sterility—I say in time, for in most cases impregnation does not occur for some time after the apparent cure.

I may mention that this constricted and ulcerated state of the lower part of the uterus produces two effects, which are calculated to mislead, and do very often mislead, practitioners. It induces a hypertrophied condition of the body, and a considerable enlargement of the cavity of the uterus; and till I was satisfied of this by a (comparatively) frequent occurrence of such cases, I was inclined to regard, and did in reality often regard them as cases of hypertrophy, and so employed a treatment that not only failed of its anticipated effect, but weakened the patient, and greatly increased the local symptoms as well as reduced the general health. I am quite confident that no amoun of depletion, either by leeches or scarification, and that no local application of ointment will remove the constriction and ulceration, though they may for a time relieve the congestion, heat, and irritation that generally accompany them, but which soon disappear without weakening treatment when their cause has been removed; and while I cannot help insisting that the repeated application of leeches in the treatment of uterine disease is very rarely necessary, I cannot help also declaring that I have known many cases in which the health of the patient has been seriously impaired, and life even compromised, by such treatment.

Any practitioner who has seen much of uterine disease may verify what I have said in regard to ulceration *within the womb*, by what he observes through the speculum in those cases where the ulceration is on the *vaginal portion of the os externum*. A patient with an anxious, weary expression of countenance, and complaining of the ordinary local and general symptoms of leucorrhœa from ulceration, comes to consult us. On examination, we find the expected ulceration or abrasion, and some congestion. We apply the solid nitrate from time to time till the ulcer cicatrizes. We do not deplete nor mercurialize—in short, we do not weaken the patient. She recovers her health, her anxious expression vanishes, and in course of no long time she becomes pregnant. This, which we *do see*, as occurring at the *os externum*, occurs still more frequently at the *os internum*, where we *cannot see* it, and precisely the same treatment is applicable to the one as to the other, with this addition, that before we can apply the nitrate of silver in the latter case we must dilate, and with this difference, that while the former or

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external species of ulceration almost invariably occurs in those who have had one or more children, the latter, or internal, almost as invariably is found in virgins and in those who have had none.

The following is one of many illustrating this form of the disease:

Mrs. A——— has been married for nine months, when she had what was supposed to be a miscarriage; but from the menstruation, though for several months very scanty, having never been entirely suspended, and from a minute examination of the os and cervix uteri, I was quite satisfied that she had never been pregnant. When she first consulted me, she believed herself again at about the end of the third month of pregnancy; and as I was unwilling to incur the charge of having induced abortion, I contented myself with making a superficial examination, and waiting till time should put it beyond question one way or the other. She had however been regularly, though very scantly, menstruating, and though after a time she increased in size, and her mammæ (*not* the areola) enlarged and she had morning sickness, and many other of the signs and symptoms of pregnancy, I was quite confident that she was not pregnant. Still, she and her friends deprecated interference, and she went on until she reached the (supposed) seventh month. At this time I was desirous to begin the treatment that I thought likely to remove both the disease and the sterility, and requested the opinion of a professional friend, who agreed with me as to the non-pregnancy. I then examined with a bougie, and found marked constriction at the os internum, and *very acute pain*, produced by the passage of the bougie—pain described as being similar to that produced by the extrusion of a small clot of blood during the menstrual period. The leucorrhœa was intra-uterine, and in considerable quantity about midway between the two periods.

The treatment (local) consisted in dilatation of the passage as far as the cavity of the body of the womb; and in affecting this, I remarked what is, I believe, very common in such cases, that after passing the constriction at the internal os the bougie reaches a cavity of much larger dimensions than natural, in which it can be moved about with freedom, and yet containing no polypus or tumor, and with its walls slightly increased in thickness, as if the effort to expel the clots at the menstrual period through the narrow neck had given rise to this form of hypertrophy with dilatation, as is seen in the case of the heart. The dilatation was followed by the application of the solid nitrate of silver to the diseased part, and this was repeated till all tenderness was gone. Complete relief from pain during the menstrual period was the consequence, and ultimately the pa-

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tient became pregnant. She has since her delivery (which took place at the full time) enjoyed perfect health.

It were easy to detail many such cases, but they are all more or less alike.

III. Another cause of sterility is a diseased state of the lining membrane of the cavity of the uterus, not necessarily (though not unfrequently) accompanied by the constricted and ulcerated state of the cervix referred to in the preceding section.

The chief symptom of this is the persistent continuance of uterine leucorrhœa in very considerable quantity, attended by the usual weakness, discomfort, irritability, and despondency, observed in most affections of the womb. The patient feels better at, and immediately before and after, the menstrual period, but feels all her ills heavy on her in the intermediate time.

In these cases the whole or greater part of the lining membrane of the womb is diseased. It is quite possible that the seminal fluid may pass into the womb, so as to come in contact with the ovum on its way from the ovary; but it is probable that the ovum (impregnated) when it reaches the womb does not find a healthy point of contact, and that therefore it passes through and perishes. In short, there is frequent impregnation, and as frequent destruction of the ovum. The object in view, therefore, is to restore a healthy state of the mucous membrane, and thus at the same time remove the disease and the sterility. The process of treatment is similar to that for the previous class of cases, with this difference, that the cavity of the body of the womb requires to be cauterized. This should be done at the end of the first week after the menstrual period, and repeated once a month till a healthy state and action are induced.

It is possible that the treatment of this class of cases may be conducted on different principles with success; but to me the plan mentioned seems the most simple, direct and successful, and it has this great recommendation, that it is quite as safe to apply the caustic to the inside as to the outside of the womb. I have said nothing of the general treatment; but though very important, there is nothing in it very different from what has been long and is every day pursued.

Mrs. M——— had been married for several years, and had enjoyed good health till her marriage. From that event she dated her complaints, all of which pointed to the uterine system. In this case the prominent symptom was the uterine leucorrhœa between the menstrual periods commencing a few days after the disappearance of the menstrual fluid, and continuing generally for ten days. She was comparatively well just before and after the menses, but when the white discharge appeared, she *felt* there was something wrong,—something that

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weakened and reduced her; and though she had undergone treatment of various kinds for it, the disease still persisted. On examination I could detect lateral displacement of the uterus, but no constriction. The body of the womb, however, was tender to the touch, and the bougie, when fully introduced, occasioned unusual pain. It appeared to me that the disease in this case lay in the cavity of the body; that the lining membrane was affected over a considerable surface; and that the treatment should consist in very free and repeated causticatiion of the whole mucous membrane. Having dilated the cervix with a sponge tent, I did so, and with a very gratifying result. —The body of the womb became gradually less tender, the leucorrhœal discharge diminished, and lost its muco-purulent character; the vagina, which was tender from the acrid character of the discharge, became smooth and soft; the back lost its weakness; the general health became restored; and ultimately pregnancy supervened, with a favorable result.

In conclusion, I may add, that in connexion with this mode of treatment, there is a class of miscarriages in which this cauterization of the internal surface of the uterus is very successful —I mean, those in which an abortion has occurred between the second and third month, followed by general weakness, from which the patient does not recover, and the other uterine symptoms already detailed, and where a second pregnancy seems impossible. In these cases, examination with the uterine bougie generally communicates the feeling of its coming in contact with a rough, somewhat hard, uneven surface.—[*London Lancet.*

Plea for Mobile as a Site for a Medical School!

[In the transactions of the Alabama State Medical Society we find the oration of Dr. W. Taylor, who selects as his theme, *Mobile* against the world, as the great radical centre of the *south*, as Philadelphia is for the *north*, and St. Louis is for the *west*. Hear him while he rides over the field.]

"The palm of medical teaching in the south is vascillating: it does not appear to be centering to any particular point. Kentucky cannot settle it, for the University at Louisville is on the wane, and the radiance of Transylvania lies in the past; Tennessee cannot stay it, for Nashville does not seem to be so happy a location as some others for maintaining a large public school, while Memphis has never claimed more than ordinary facilities for medical education. New Orleans is objectionable in consequence of the epidemics which so often scourge that otherwise favored city. The schools of Virginia

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and Maryland have not been successful, and are in little favor with southern students; the Augusta Medical College is entirely defunct, while the Charleston school is never crowded with numbers."

In our opinion six elements are necessary for the permanent success of a Medical School.

1. It should be accessible from all points.
2. It should be in a healthy city, and yet possessing such a population as will render its hospitals worthy of the name.
3. Its location should possess hospitals not in name only—but in truth—to which the students should have regular admittance.
4. It should possess all the requisite advantages for instruction in the Demonstrative branches, Anatomy, Surgery and Pathology, so that its medical school will not have to rely upon the transport of materials for hundreds of miles.
5. The Professors should not be *fixtures* by any tenure whatever, either of money or clique or favoritism, but of merit only. They should, therefore, be members of a department of a regularly charted Institution, whose Trustees are men uninfluenced by the considerations which are too frequently brought to bear in the discharge of such duties.
6. It should enter the field of medical education determined to resist whatever may be erroneous in the present system of instruction, and to exert itself to bring about a reform till the teaching of the science is commensurate with its importance.

And then where there is a generous public to sustain, and a confiding profession outside the Institution to countenance and encourage, its progress cannot be otherwise than onward.

Many, if not all of these elements are possessed by Mobile, and she is the only city in the south, as St. Louis is in the west, and Philadelphia in the north, that does possess them. These are to be the three great Medical centres, and every other locality will yield the palm to them.—*Southern Journal, from the N. Y. Medical Gazette.*

Medical Practice among the Poor.—I trust that I shall not be thought wanting in humanity, if I suggest in this paper little more than a business view of the relations that subsist between the sick poor and the main body of the doctors. Mr. Souchong, who supplies tea to the poor in ounce packets at an enhanced price, and not always in the state in which it left China; Mr. Sirloin, who sells them the chips and fragments of his meat at a good profit; Mr. Wick, who gets the half penny out of the poor man's penny candle, may hold up

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their hands at the hard-heartedness of an apothecary who meanly connects thoughts of the sick poor with thoughts of his own day-book and ledger. Be it so. Many a night, when Mr. Souchong was snoring soundly with his cash-box on the chair at his bed-side, I and thousands of my brethren, in town cellars and garrets, or in country cottages by lonely hill-sides, have set sleepless by the bed of a poor man or woman tossing with pain, have had our hands grasped firmly by sufferers who held to us as to dear life; and forgetting our own weariness, have labored to be strong in help, and strong in sympathy, to cheer the downcast, and to comfort those that mourned. Of course we are hard-hearted. Mr. Souchong, who happens to be a poor law guardian, and who knows it, says so.

The profession looks to an undiscerning public for patronage which is much too unwisely and unequally distributed. It is full of struggling men whose competition with each other would be fierce if it were not restrained by gentlemanly feeling, and a rigid code of etiquette. In such a profession jealousies and morbid sensitiveness must—as they surely do—exist. The folly of the ignorant among the public opens many a profitable path to meanness. Wordly advantages are offered most freely to all medical men who will be humbugs. Some surely must be too weak to withstand temptation of this kind; and, indeed, it is well known that so far as we could do so with honor we have all sought to satisfy the public by including a very considerable mass of humbug in the routine of our daily practice. We are not to blame for this, any more than we are to blame for the heart-burnings that arise among ourselves out of the general impoverished state of the profession; called upon as it is to give its services gratuitously to three-fourths of the population of the country. We accept cheerfully, I say again, that last-mentioned necessity; but it is not requisite that we should work, as we so generally do work, unthanked.

Apart from a sense of duty done, the sole profit that a medical man gets out of attendance on the sick poor, is experience. But he gets that out of the sick rich who pay him for his cares; yet he is content to take it as his only profit from the poor. His need of experience is great. He requires it first in hospitals, in which poor men, women, or children are collected for gratuitous treatment by the foremost men of the profession; who in that way bear their share of the general burden (no payment being attached to hospital appointments;) and, at the same time, impart much of their own practical knowledge to their juniors. Then the juniors, when they have received their diplomas, begin practice by the acquisition of some more experience among the poor; and, with that view, seek small

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salaried positions as house surgeons in provincial infirmaries, or as assistants—doers of the parish work—in the pay of established surgeons.

These are the young men entitled whippersnappers; to whom the poor are said, by Messieurs Souchong, Sirloin, and Wick, to be shamefully and neglectfully handed over. Mr. Souchong, Sirloin, and their friends, refuse on their own parts to take counsel of a whippersnapper; so do their betters with considerable unanimity. They wait until he has more experience; that is to say, until he has tried his 'prentice hand sufficiently among the poor. He would be happy enough to attend viscounts and bankers; but he is bidden by society to try his hand first among beggars. He does so in all good faith and earnestness; whereupon cries virtuous society, it is a shame to intrust to whippersnappers poor men's lives! Now, I believe that, as the world of physic goes, the poor are not in this respect much to be pitied; and that on the whole, they perhaps get more true help in the way of medical attendance than several of the classes next above them; including nearly all the poorer half of what are called the middle classes. The poor man in any town, if dangerously ill, may go into a hospital, where he not only gets the help of such professional advice as, except himself, only the wealthy can afford to summon to their cases, but he gets the advice carried out for him by a system of skilled watching and tending such as many a duke is unable to secure. In every town, almost every surgeon or physician, famous for his skill in treating any given form of disease, sits at some hospital or dispensary at certain hours, to prescribe gratuitously for the poor who come to him; securing himself the opportunity of watching and comparing a great number of cases, and on the other hand giving to the poor opportunities that very seldom can be compassed by a tradesman's purse. Even the out-door visiting by whippersnappers is rather a gain to the sick poor than not. The young practitioner, fresh from his studies and his hospital training, has not, indeed, independent experience; but he has the best and latest knowledge fresh in his head, and the experience of first-rate practice that he has been witnessing, still at his fingers' ends. This is not the case with men in active practice, who cannot keep pace with the growth of scientific knowledge in their own profession. Thus the whippersnapper may know more than the old established man, whose very success makes him a man of routine, and leaves him no time for study. Perhaps, however, this youth is a fool who has lost time and misused his opportunities. Granted. Perhaps the old man, too, was such a fool in his youth; and if he was, assuredly he never had it in his power afterwards to

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conquer the ignorance with which he started. He has learned only to hide it; to find a substitute for knowledge sometimes in assumption—sometimes in gruffness or some assumed eccentricity of manner. But the young fool who, distrusting himself, is not bound by any delicacies of position to abstain from seeking information of his seniors, is a much safer counsellor to a poor man—or even to a rich man—than the old fool who is pledged to maintain a character for wisdom.—*Household Words.—N. Y. Med. Gazette.*

RETROSPECT.

A Hint to Medical and Pharmaceutical Societies.—Glucogenesis.—In view of the carelessness and even rashness with which medicines are occasionally prescribed and dispensed by both physicians and apothecaries, we thought that it would be interesting as a matter of reference, and perhaps for future discussion, to publish the following extract from the Prussian Pharmacopœia; it is a list of certain medicines considered dangerous, with the doses which the apothecaries are not allowed to exceed. This list is published by the authority of the Prussian government. Whenever it is the physician's desire that these medicines should be put up in larger doses than those to which apothecaries are limited by law, he is required to affix the following mark (!) to his prescription. This mark is to guard against error or inattention on the part of the physician; who then becomes responsible for the dose he prescribes?

In France, poisonous doses of medicines are besides required to be put up in papers of a certain color. In that country, there is also a restrictive list of medicines to which apothecaries must submit; it is even placed in their shops in some conspicuous place.

Could not something of the kind be agreed upon among us? This seems to be so much the more necessary as it is a notorious fact that the practice of medicine and pharmacy is open to the public, and unworthy members are, as a consequence, occasionally found in both. Moreover, as it appears, by the many failures at medical reform, that it is against the spirit of the country to allow the State to protect the public by legislating on these matters, could not some agreement upon this point be adopted by Medical and Pharmaceutical Societies in different cities? Could not the National Medical Association

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take up this subject, and recommend to the different local, medical and pharmaceutical societies the adoption of a restrictive list which it would itself publish.

We offer the foregoing remarks simply as a hint—here we present the list alluded to above:

Acid Hydrocyanic. (dilute) gt. j.
Cupr. Ammoniat..... gr. ij.
Aquæ Amygdal. Amararum gtt. lx.
Argenti Nitrat. fus..... gr. ½
Extract Aconit..... gr. iij,
" Belladonnæ ..... gr. ij.
" Colocynthidis..... gr. j.
" Conii Maculat..... gr. iij.
" Stramonii..... gr. j.
" Digitalis ..... gr. iij.
" Helebor. Nigr..... gr. x.
" Hyoscyami..... gr. iij.
" Lactucæ Virosæ..... gr. x.
" Nicotianæ..... gr. ij.
" Opii..... gr. ij.
" Nuc. Vomicar Aquos..... gr. iv.
" " " Spirit.... gr. ij.
Auro-Natru. chlorat..... gr. j.
Cantharidis Pulv..... gr. j.
Colocynthidis..... gr. ij.
Cupri. Sulphur puri..... gr. ij.
Ferri iodid..... gr. iv.
Fol. Belladonn. Pulverat..... gr. v.
" Digitalis..... gr. v.
" Hyoscyam. Pulv..... gr. v.
" Nicotianæ..... gr. ij.
" Stramonii..... gr. iv.
" Foxicodendri..... gr. vj.
Gum Gambogi..... gr. iv.
Herb. Aconit..... gr. v.
" Conii Maculat..... gr. v.
" Ranuncul..... gr. x.

Hydrargyr. Bichlorati. Corrosiv..... gr. ¼.
" Bi-todid rubri..... gr. ¼.
" Bi-todid Flavi..... gr. ij.
" Oxidat. rubri..... gr. ½.
Kreosot..... gtt. i.
Liquor Hydrargyri Witrioi. gtt. iij.
Morphiæ..... gr. ¼.
Nux. Vomicæ Pulveratæ.... gr. ij.
Olei. Amygdalarum æther... gtt. j.
" Crotanis..... gtt. j.
" Phosphorat..... gtt. xxx.
" Sinapis..... gtt. ½.
Opii.. ..... gr. ij.
Plumb. Acetat. Depurat..... gr .ij.
Radieis Belladonnæ Pulv.... gr. iij.
" Hellebore Albi. Pulv. gr. v.
" " Nigri..... gr. xx.
" Scillæ Pulv..... gr. iv.
Seminis Stramoni Pulv..... gr. iv.
Liquor Potassæ Arsenitis.... gtt. x.
Tartar Emetic..... gr. vi.
Strychniæ Nitrat..... gr. ½.
Tincturæ Cantharidis..... gtt. xv.
" Colocynthidis..... gtt. xx.
" Conii..... gtt. xx.
" Digitalis.....gtt.xxx.
Tincturæ Iodini..... gtt. x.
" Lobeliæ..... gtt. xxx.
" Opii.....gtt. xxx.
" Stramonii..... gtt. xv.
Veratriæ..... gr. ¼.
Zinc. Chlorat ..... gr. ¼.

(The above list was kindly furnished by Dr. F. T. Berghoff of this city.)

—

Glucogenesis is sugar manufactured in the liver? This question, after several months of learned discussions, seems to be farther than ever of solution. The gluco-hepatic theory, probable a short time ago, has now become very doubtful. The question at this day stands about thus:

1st. There is sugar in the liver and in the blood of the hepatic veins; this discovery is due to Mr. Bernard.

2d. There is sugar in the general sanguiniferous system; this discovery is due to Mr. Figuier.

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3d. It appears that there is sugar also in the vena portæ; this discovery, if it be real, will be due to Mr. Figuier.

4th. It is probable that the sugar found in the hepatic veins is partly formed in the liver; this discovery, if real, will be due to Mr. Bernard.

5th. In order to decide the question, it is indispensable to establish that there comes from the liver a quantity of sugar notably superior to that which enters it.

L. CH. B.

PART IV.

EDITORIAL.

CLOSE OF THE VOLUME.

The present number closes volume thirteenth of our Journal. During the year we have added many valuable names to our list of subscribers, and have received numerous evidences of kindness from our professional brethren, for which we are thankful; but still there are many others who have not yet seen fit to favor us either with their names or their contributions, from whom we would be glad to hear. On the first of the year a new volume will commence, and we take this occasion respectfully, but earnestly, to urge our friends to use their best efforts to extend our circulation, so that we may be able to increase the size, and otherwise improve our Journal. It will be recollected that the price of subscription has been reduced from *three* to *two* dollars a year.

MEDICAL CLASSES IN ST. LOUIS.

The number of students in attendance on our medical schools this season, exceeds that of last year by at least one-third. The exact number we are not able to give at present. It is a source of gratification also to be able to state that while there is an increase in numbers, there is likewise a manifest improvement in the character and general intelligence of those

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aspiring to the honor of the doctorate. With such material our schools will be enabled to turn out graduates who will be creditable them, and ornaments to the profession.

STATE MEDICAL ASSOCIATION.

Our readers in Missouri will be pleased to bear in mind, that the next annual meeting of our State Medical Association will be held in this city, on the second Tuesday in April next, on which occasion we hope to see a large representation from all parts of the State. But in order to effect this, it is indispensable that there should be organized, without delay, town and county societies, where such do not already exist. Indeed, one of the leading objects of our State Association is to effect, as speedily as possible, a thorough organization of the profession in every county in the State, by means of local auxiliary societies; and surely this is an object so worthy and so desirable, that it must commend itself to every physician who has any love for his profession or the least desire for his own improvement. Will not our brethren, therefore, throughout the State, awake to the importance of this work, and see to it, that our State Association shall not die for want of an effort on their part to keep it alive? We would also urge upon those who are appointed, to report on special subjects at the next meeting, to have their reports prepared, so that we may have, not only large, but also a profitable meeting in April next.

MEDICAL MISCELLANY.

Dr. Watters on Life.—The series of articles by Dr. Watters of this city, on "Life," which for some time past have appeared in this Journal, will be suspended until spring, when they will be resumed and completed. The Doctor's engagements are such as to prevent his continuing them at present.

Statistics of Paris.—The population of Paris may be considered, with the environs, as 1,200,00. Of these, an average of 70,000 receive aid and food from the administration of

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Assistance Publique. Besides this average, must be counted the following special cases:—2,800 octogenarians, 3,000 septuagenarians, 1,400 blind persons, and 600 paralytics. In the hospitals are 63,237 beds, of which 46,538 are for civil occupants, and 16,699 for soldiers. From 1804 to 1822, the annual number of admissions was about 40,000; in 1829, it was 74,000; and in 1850, 83,000, and the hospitals refused about 80 applicants a day.

Regulation respecting Poisonous Substances.—According to the Lancet, the Prefect of the department of "Les Landes," in France, has just published a regulation which is likely to diminish the chances of mischief in the dispensing of actively poisonous substances. The pharmaciens are directed to use *red paper* for the labels of bottles which contain dangerous fluids, the words "for external use" being written thereon. The labels of ordinary medicine bottles, for internal use, are to be white. In this country, chemists are generally very careful to write "for external use" and "poison," when necessary; but the distinctive *color* is certainly an improvement, as the bottles may fall into the hands of persons *who cannot read.*

Retreat for Consumptives.—Dr. N. D. Benedict, late superintendent of the New York State Lunatic Asylum, is about to establish at Magnolia, East Florida, a retreat, or hotel for invalids, where those seeking the benign influences of a southern climate may enjoy the benefits of judicious medication, proper hygienic regulations and comfortable board and lodging. We know Dr. Benedict personally, and take pleasure in bearing testimony to his superior fitness for carrying out such an enterprise. If we mistake not, he is suffering himself with a pulmonary disease, and his object in going south is to benefit himself as well as others. Magnolia is in East Florida, on the river St. Johns, between Jacksonville and St. Augustine, and one day's journey by steamboat from Savannah and Charleston.

Solution of Tannin in Aromatic Sulphuric Acid.—Dr. Butler, of Clefton, Ohio, recommends in the Medical Counsellor, the above solution as an efficient remedy in hemorrhages from the various organs, and in the bowel complaints of children. The proportions used are as follows: Tannin ℥ iv, Acid Sulph. Arom. ℥ i, mix—of this, fifteen drops may be used three times a day, or oftener if necessary. The combination strikes us as a good one. Dr. B. states, that "several cases of menorrhagia have been relieved by it without a single failure."

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A Good Rule.—The physicians of Allegan, Michigan, have adopted and published an excellent set of rules for their own government and protection, one of which we would like to see universal in its application. For instance, they mutually pledge themselves not to attend a patient unless the physician previously in attendance shall have been "regularly discharged, and satisfactorily compensated for his attendance." And in case the patient refuses to settle his back scores they decline to attend him altogether. Such a regulation would put an estoppel on a class of patients who are in the habit of changing their physician whenever a bill is presented.

Burns.—Dr. Martin, a French physician, recommends the application of the white of egg, so as to form a covering in case of severe burn. The albumen, when applied, he says, forms a covering impermeable to the air, and possesses all the advantages of collodion without its irritating properties.

Local origin of Yellow Fever.—In a late number of the New Orleans Medical and Surgical Journal, Dr. Dowler says: "After the most searching investigation, there appears to be entire unanimity of opinion, both among contagionists and non-contagionists, that the yellow fever of 1855 originated in New Orleans, and that all the earlier as well as the latter cases originated among persons who had not been in any manner exposed to the fever in foreign parts or to imported contagion." And yet a rigid quarantine has been enforced throughout the season, to the great embarrassment of commerce, as well as to the disgrace of the city!"

The late Dr. Carter P. Johnson, of Richmond.—The last number of the Virginia Medical and Surgical Journal contains a beautiful and merited tribute to the memory of this young but distinguished physician who perished in the ill-fated "Arctic." He was an honor to his native State and to his profession, and in his early and sad fate science has sustained a real loss.

Mortality among Physicians.—The Virginia Med. Journal gives a list of no less than *forty* physicians who have fallen victims to the yellow fever in Norfolk and Portsmouth. Among others, we notice the names of Sylvester, Constable, Upsher, Selden and Gooch. This noble company of martyrs died at their post in the faithful discharge of their duty as men and as physicians, and are as really and as truly heroes, and as much entitled to the gratitude of mankind as the proudest warriors that ever fell on the battle-field.

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Specific in Gonorrhœa.—We have received a private circular from W. R. Barton, M. D., of Harrisburg, Pa., addressed to the physicians of the United States, in which he claims to have discovered a specific in, and prophylactic against gonorrhœa, certain and sure. He does not propose, he tells us, to make his discovery a patent remedy to be vended by apothecaries, but wishes to confine it the members of the medical profession, without informing what it is. We regard this as the boldest and at the same time the meanest attempt at quackery that we have yet seen. Bold in attempting to cajole physicians into the use of his secret nostrum, and mean in wishing to fleece his brethren instead of the unthinking multitude out of a dollar, which he would have them enclose to him for a specimen of his precious truck. We would advise this sapient M. D., that as he has embarked in quackery he had as well go the whole hog, and make all the money out of it he can.

Baron Humboldt.—This distinguished savant has recently celebrated the eighty-sixth anniversary of his birth-day. Notwithstanding his great age, he still unremittingly continues his important labors—a rare example of physical, intellectual and moral vigor.

Medical College of South Carolina.—We have received the annual circular of this institution, from which we learn that during the last session, there were 197 students in attendance, of which number 77 received the degree at the close of the course. This is one of the best medical institutions in the country,—the faculty are men of talent and distinction, and the course pursued by them, whichhas been uniformly dignified and commendable, formed a striking contrast with the puffing and hurrah policy of some of their neighbors.

Important Discovery.—A. D. Knapp, of Covington, Kentucky, has published an essay, in which he claims to have discovered the cause of cholera, which he says is "a hemorrhagic termination, or a manifestation of the dying phenomena of Scorbutus." This is as clear as mud, and should entitle the discoverer to the lasting gratitude of mankind.

Dr. Elisha Bartlett.—We regret to announce the death of this distinguished physician and medical writer, which event took place at his residence in Smithfield, R. I., on the 18th July last, in the 51st year of his age. Dr. B. is well known as the author of an able work, on Typhus and Typhoid Fevers, and as having filled chairs in several medical colleges, both east and west, with eminent ability.

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Medical Department of Pennsylvania College.—The annual announcement of this young and flourishing institution exhibits a list of one hundred and thirty-five students, during the past session, including forty-one M. D's., leaving ninety-four as the net number. The faculty, although comparatively young men, are fully equal in point of talent and ability to teach, to any other in Philadelphia, and deserve to divide more equally the overgrown classes of other institutions of that city.

Memphis Medical Reporter.—This Journal enters upon its fourth volume in July past, and comes out in a new dress enlarged and improved. It is issued every second month at two dollars a year, and contains sixty-four closely printed pages, a large proportion of which is valuable original matter.

Card of the Committee on Prize Essays of the American Medical Association.

At a meeting of the American Medical Association, held in Philadelphia, May, 1855, the undersigned were appointed a committee to receive voluntary communications on Medical subjects, and to award prizes in accordance with the regulations of that body.

Each communication intended to compete for a prize must be addressed to the Chairman of the Committee, at Ann Arbor, Michigan, before the 20th of March, 1856, and must be accompanied by a sealed packet containing the name of the author, and marked exteriorly by a sentence or motto corresponding with one upon the Essay; which packet will not be opened unless the Essay belonging to it is successful in obtaining a prize.

Unsuccessful papers will be returned on application after the adjournment of the meeting of the Association in Detroit, in May next.

A. B. PALMER, M. D., *Chairman.*
S. DENTON, M. D.
A. R. TERRY, M. D.
A. SAGER, M. D.
S. H. DOUGLASS, M. D.
C. L. FORD, M. D.
E. ANDREWS, M. D.

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